

Manufacturers Record

Industry Construction

Reg. U. S. Pat. Off.



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Baltimore, Md.
APRIL 24, 1930

South Leads Way in Upward Construction Trend

Although below normal, the construction industry is steadily becoming more active. Reports throughout the country indicate that building operations are on the increase, and in consequence there is improvement noted in the unemployment situation in the building trades. We are still not "out of the woods" of dullness. It takes time for the money invested in new construction to filter into the marts of general trade. Nevertheless, the upward trend is encouraging, if not wholly measuring up to the hopes expressed by the nation's business leaders last December. With construction operations gaining in momentum as they should as the season advances, every line of business will be benefited.

In the resumption of construction activity the South is pointing the way. It is true that this section is favored by climatic advantages allowing building work to be carried on the year round, but as announced in the Daily Construction Bulletin published by the Manufacturers Record, expenditures for major industrial and building projects in the South during a recent four-weeks period set a high record. Contracts awarded and buildings proposed during that four-week period aggregated \$448,000,000, which in itself anticipates enlarged demands for material and equipment, increases employment opportunities and presages better business, from manufacturing to merchandising.

Immediately following the publication of that announcement on April 16, there appeared among the larger diversified construction projects reported by the Manufacturers Record for a two-day period: An \$18,000,000 development program in the vicinity of Miami Beach; contract was awarded for \$1,500,000 office building in Washington; purchase of a site in Florida for the building at an estimated cost of \$10,000,000 of one of the largest kraft paper mills in the country; a \$2,000,000 building program for the University of Virginia; and a permit was granted for a railroad extension in West Virginia involving the expenditure of more than \$3,500,000.

Such an encouraging volume of expenditure for development work bespeaks faith in the South not only of its own people, but of the management of national organizations who are investing hundreds of millions of dollars in industrial enterprises in this section.



If we seem too enthusiastic about the Empire New Process Bolt, it must be because we know so much about it. And we may be influenced, too, by its universal popularity.

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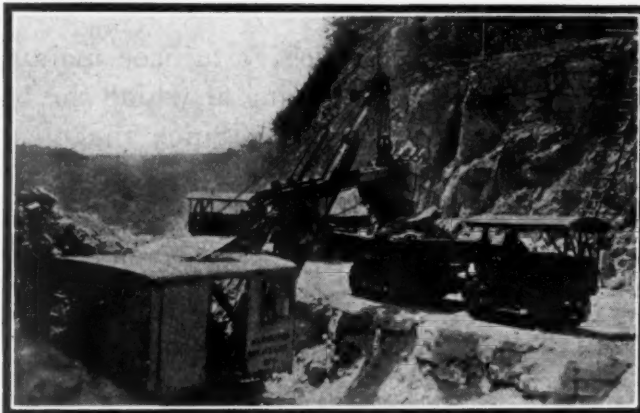
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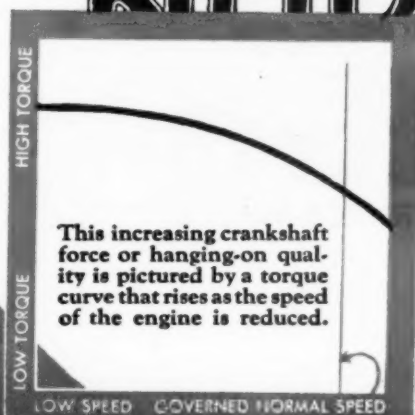
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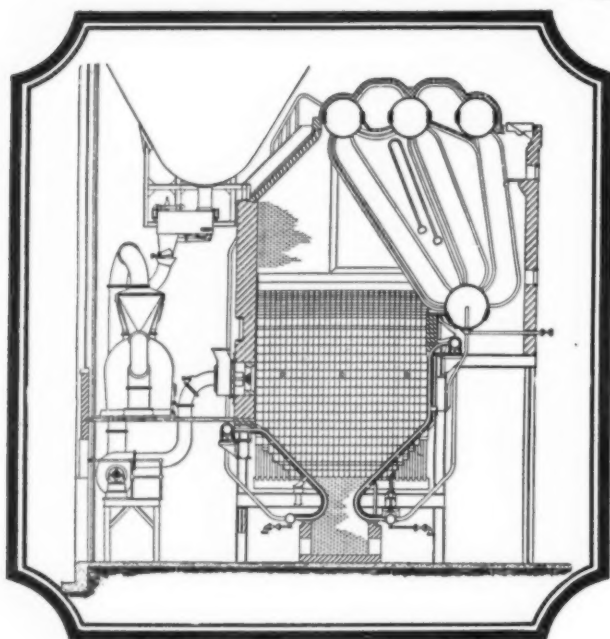
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100 Per Cent Increase in capacity of boiler unit in this paper mill obtained by changing from stoker firing to pulverized-coal firing

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Before the changeover excessive furnace maintenance and boiler outages limited the rating at which the boiler could be operated to 150 per cent. Since the changeover to Pulverized-Coal Firing, the boiler may be operated at over 300 per cent rating.

This installation is one of many where the problem of obtaining additional steam-generating capacity has been solved by the installation of Fuller Lehigh Pulverized-Coal Equipment.

[Fuller Lehigh Pulverized-Coal Equipment is also installed in the Sandusky, Ohio and Muncie, Ind., Plants of the Hinde & Dauch Paper Company]

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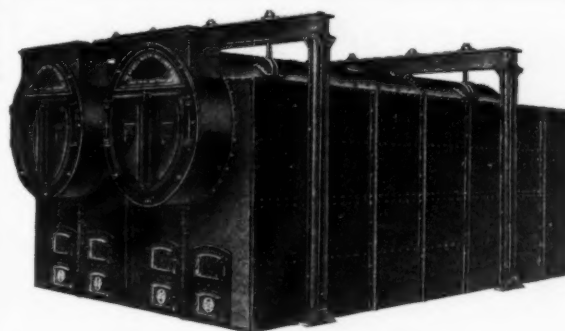
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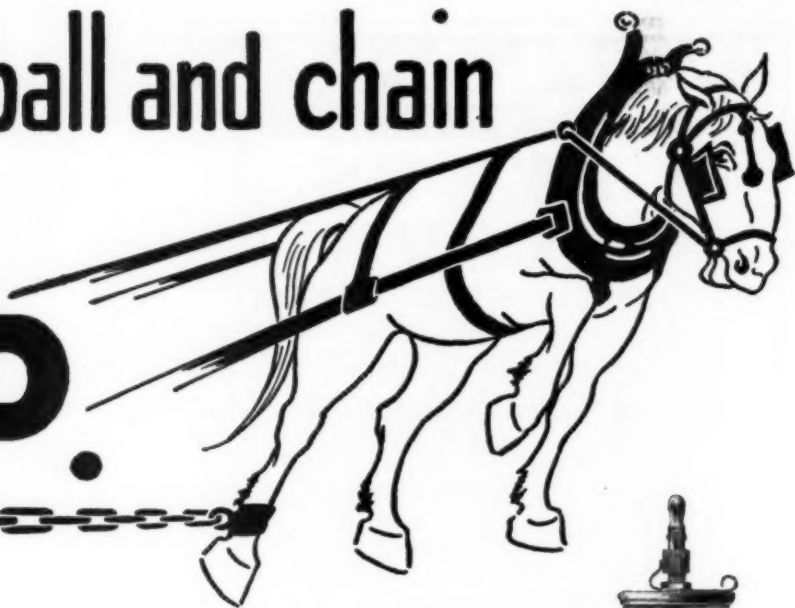
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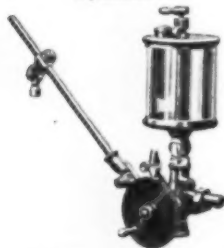
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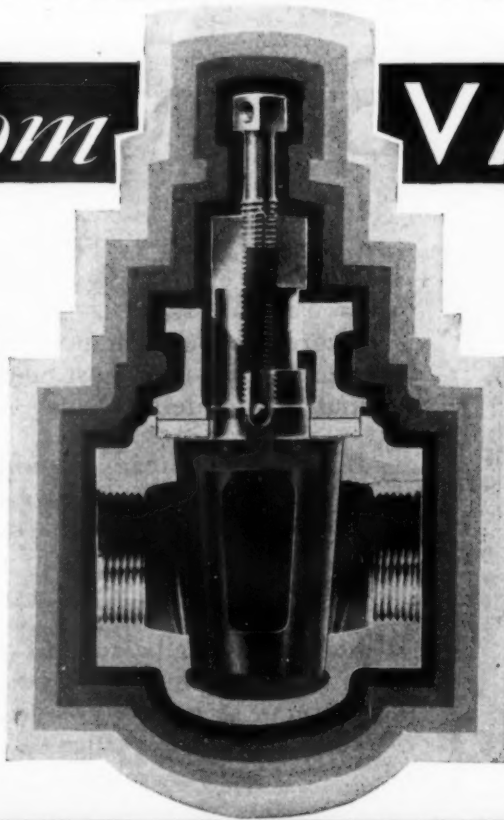
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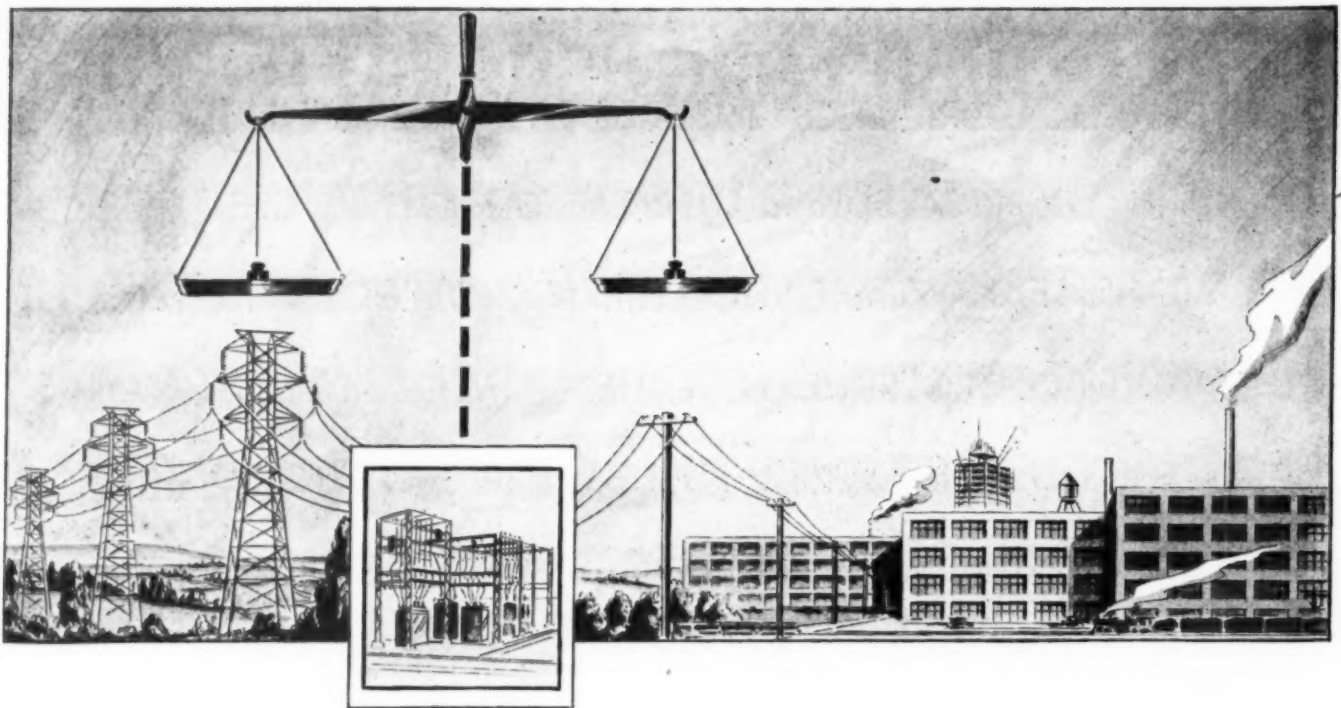
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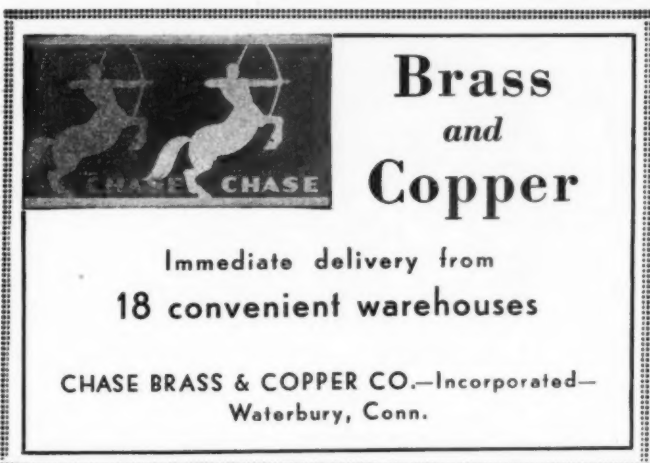
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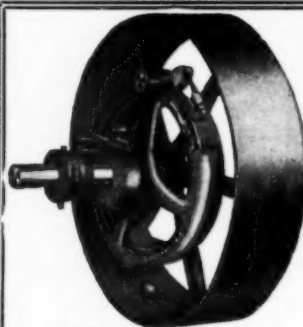
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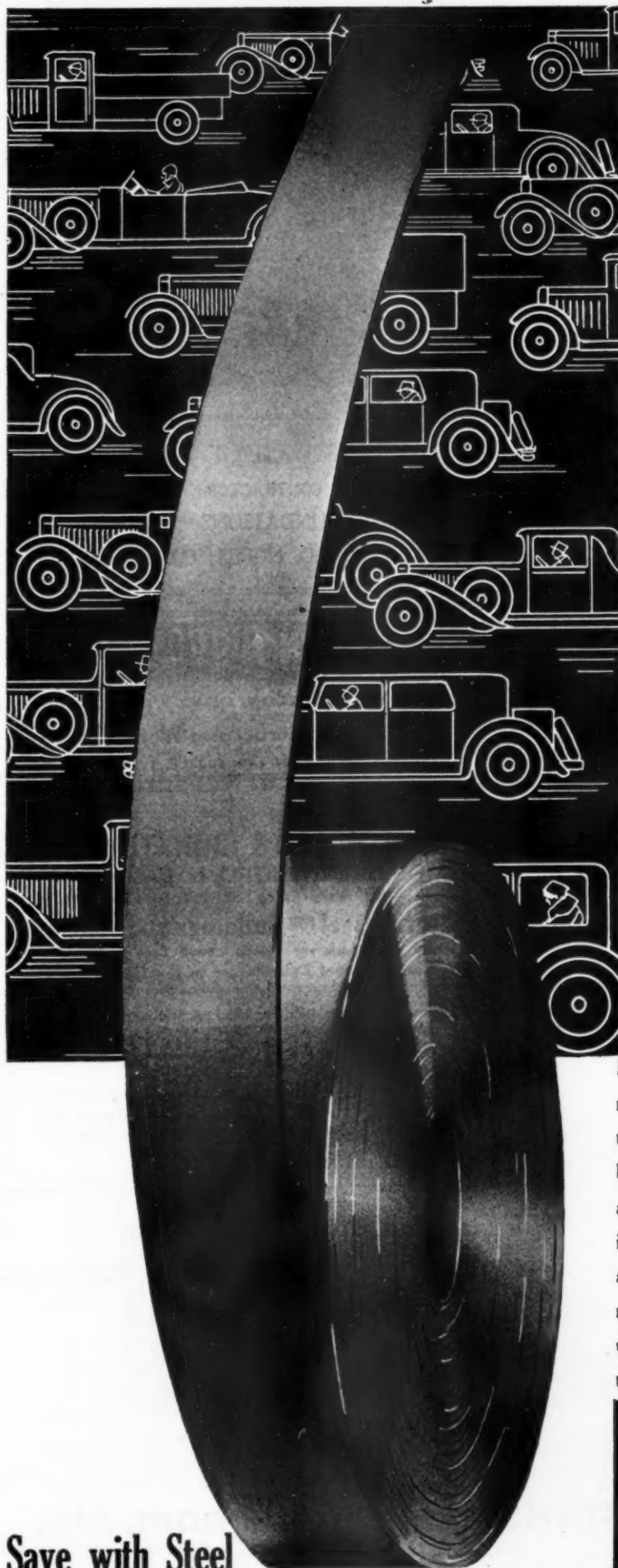


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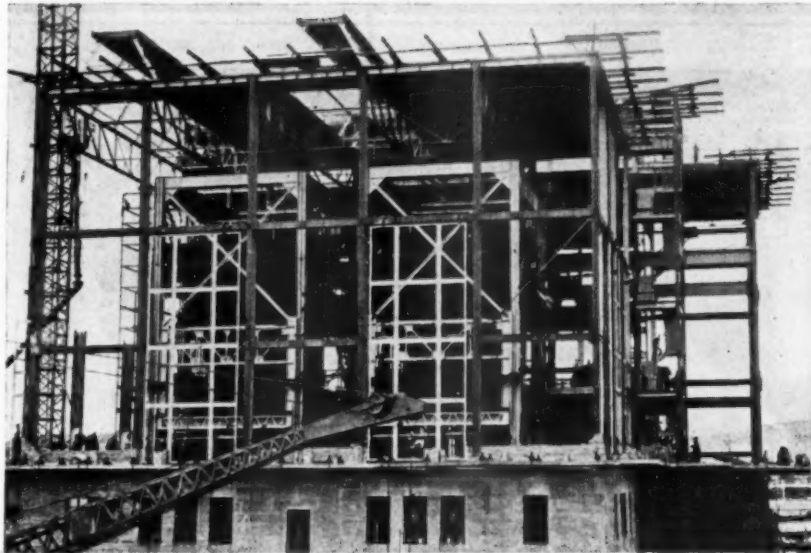
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Tampa, 1904 Tampa Theatre Bldg.
Jackson, Miss., Standard Life Bldg.

New Orleans
917 New Masonic Temple Bldg.



At top is the Rio Grande Power Station, El Paso Electric Company, El Paso, Texas. At bottom is the Baton Rouge, Louisiana, Station of Louisiana Steam Products, Inc. (Subsidiary of Engineers Public Service Co.) Both of these stations were designed and built by Stone & Webster Engineering Corporation, Boston, and are two of many power houses for which we have furnished the steelwork to these famous builders.

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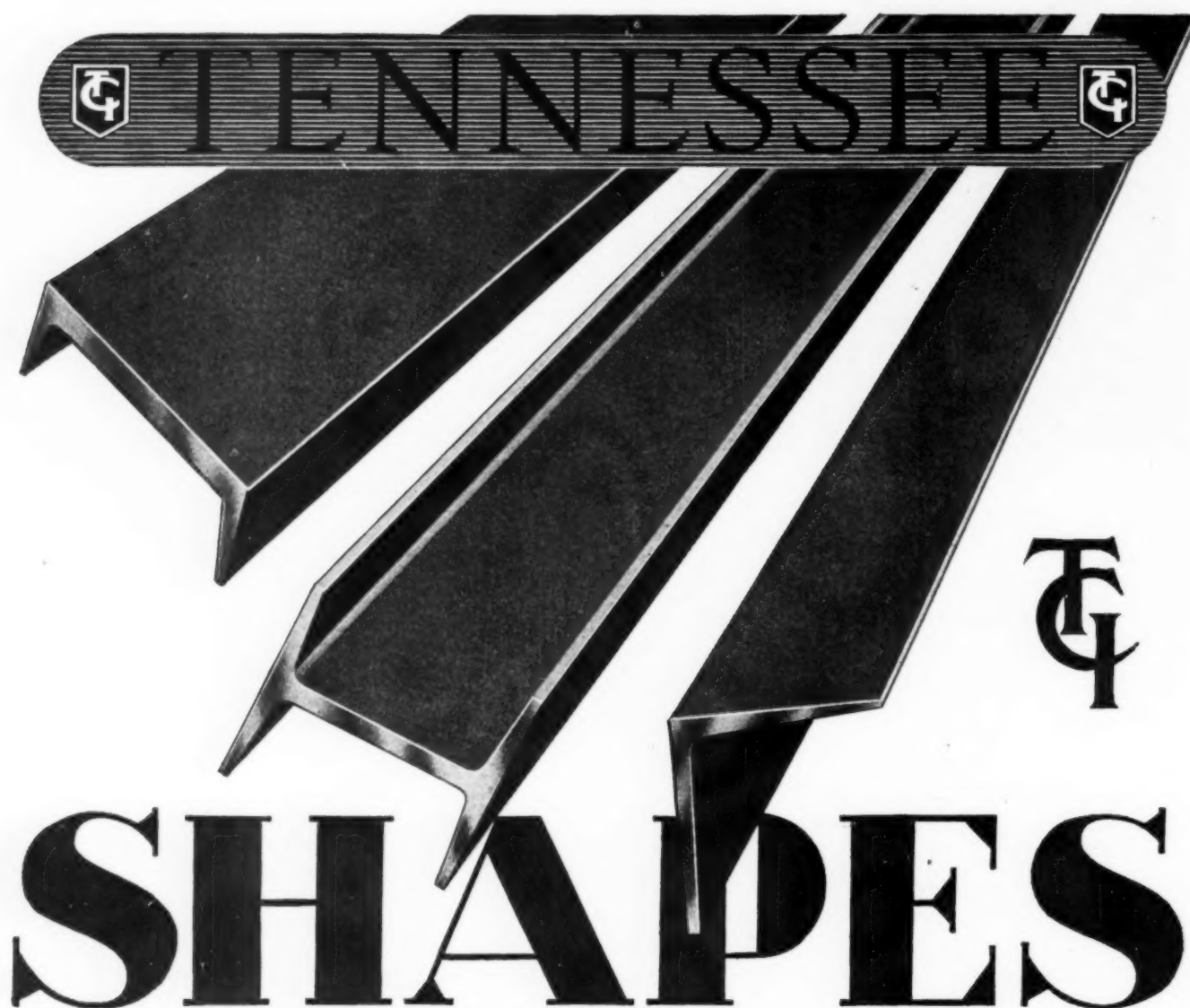
All of which means highly trained and experienced engineering, purchasing and constructing organizations who know what and where to buy. We place among our most valuable assets the confidence and goodwill of such organizations whom we have served on many installations throughout the South and Southwest.

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STRIKES AT SOME
COSTLY FALLACIES
ABOUT BUILDING
DESIGNS**

Throughout the industrial plants of the country you see five or six familiar building designs repeated again and again. A few of them are shown on the right.

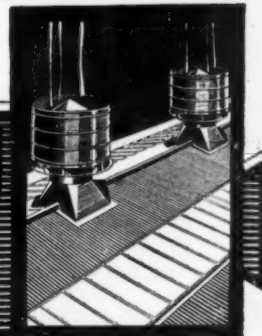
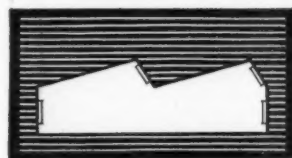
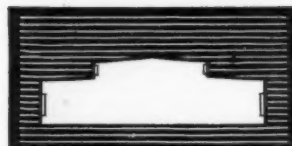
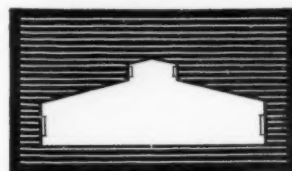
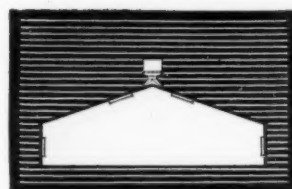
Some of those designs were developed to meet one special condition of use or one special type of manufacture. Some were developed to meet another. Some of them suit their own particular work very well, and yet are unsuited for other kinds of work.

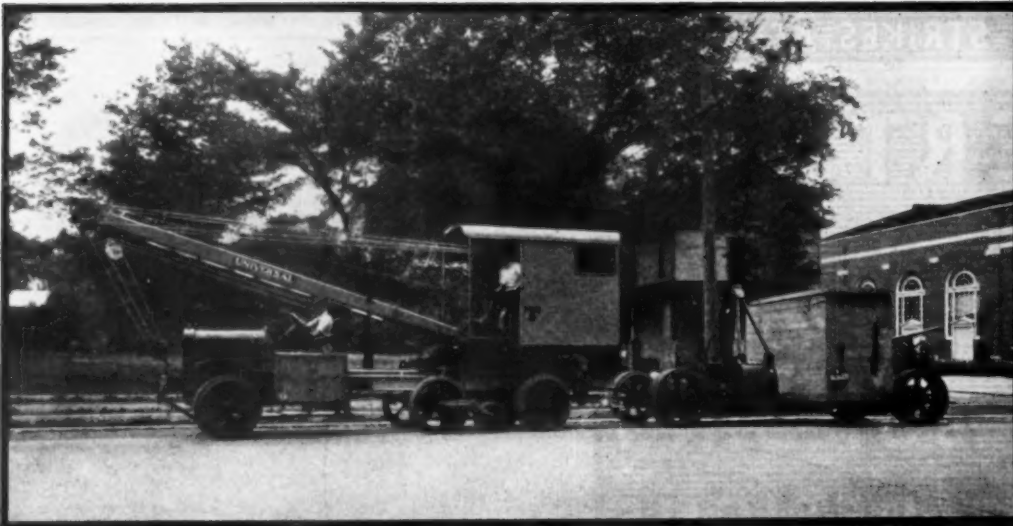
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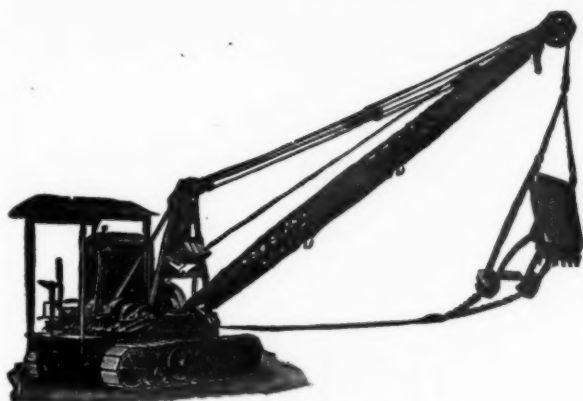
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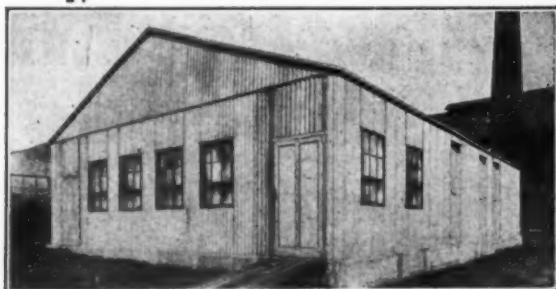
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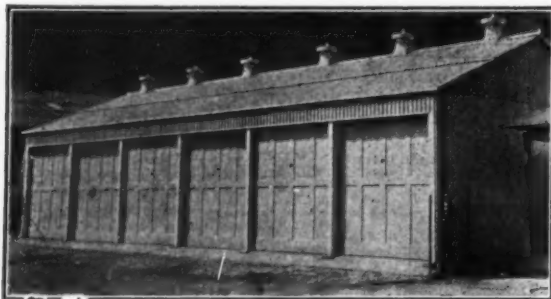
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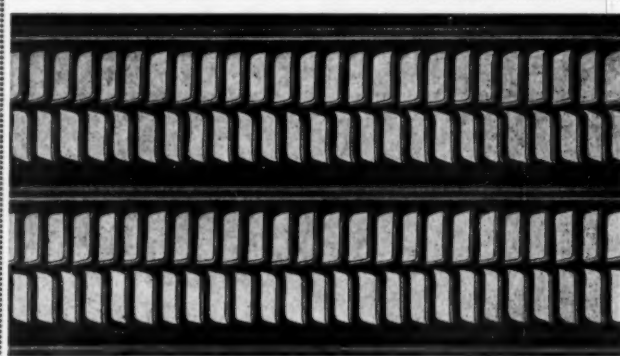
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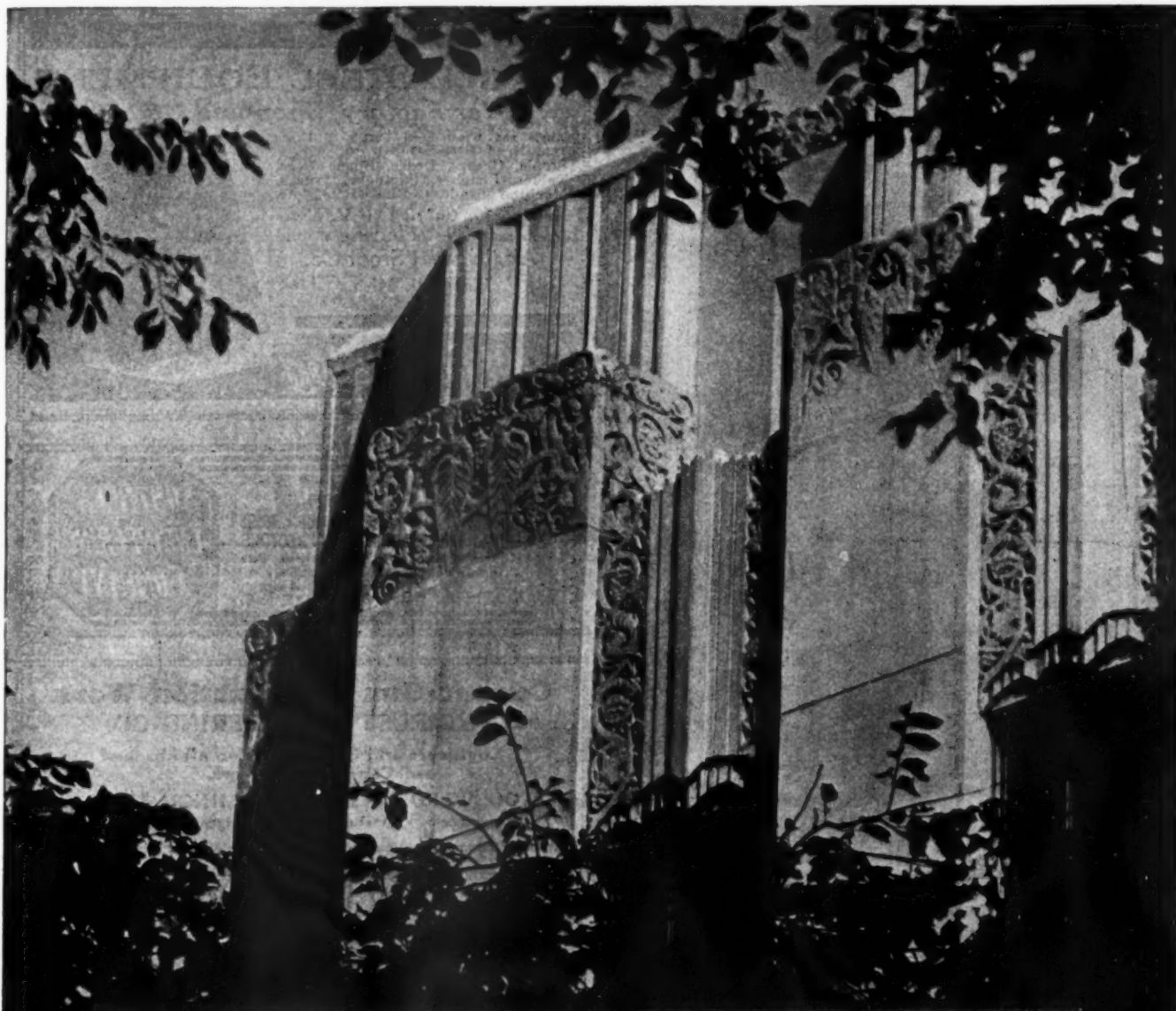
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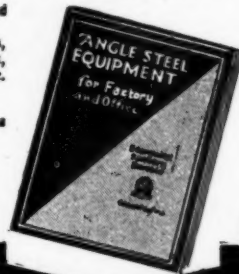
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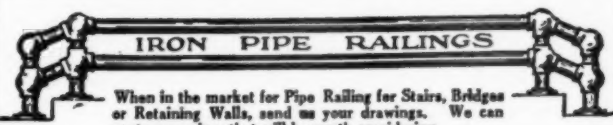
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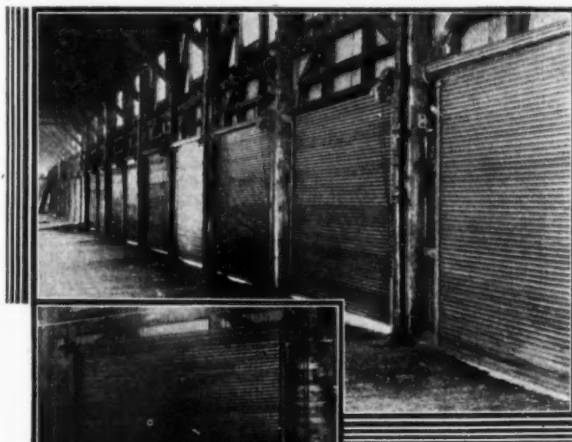
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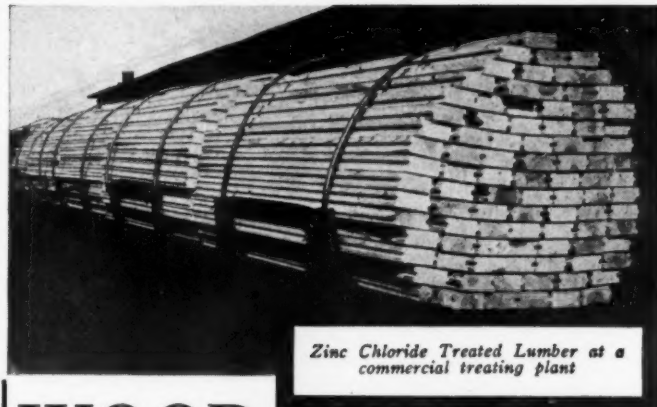
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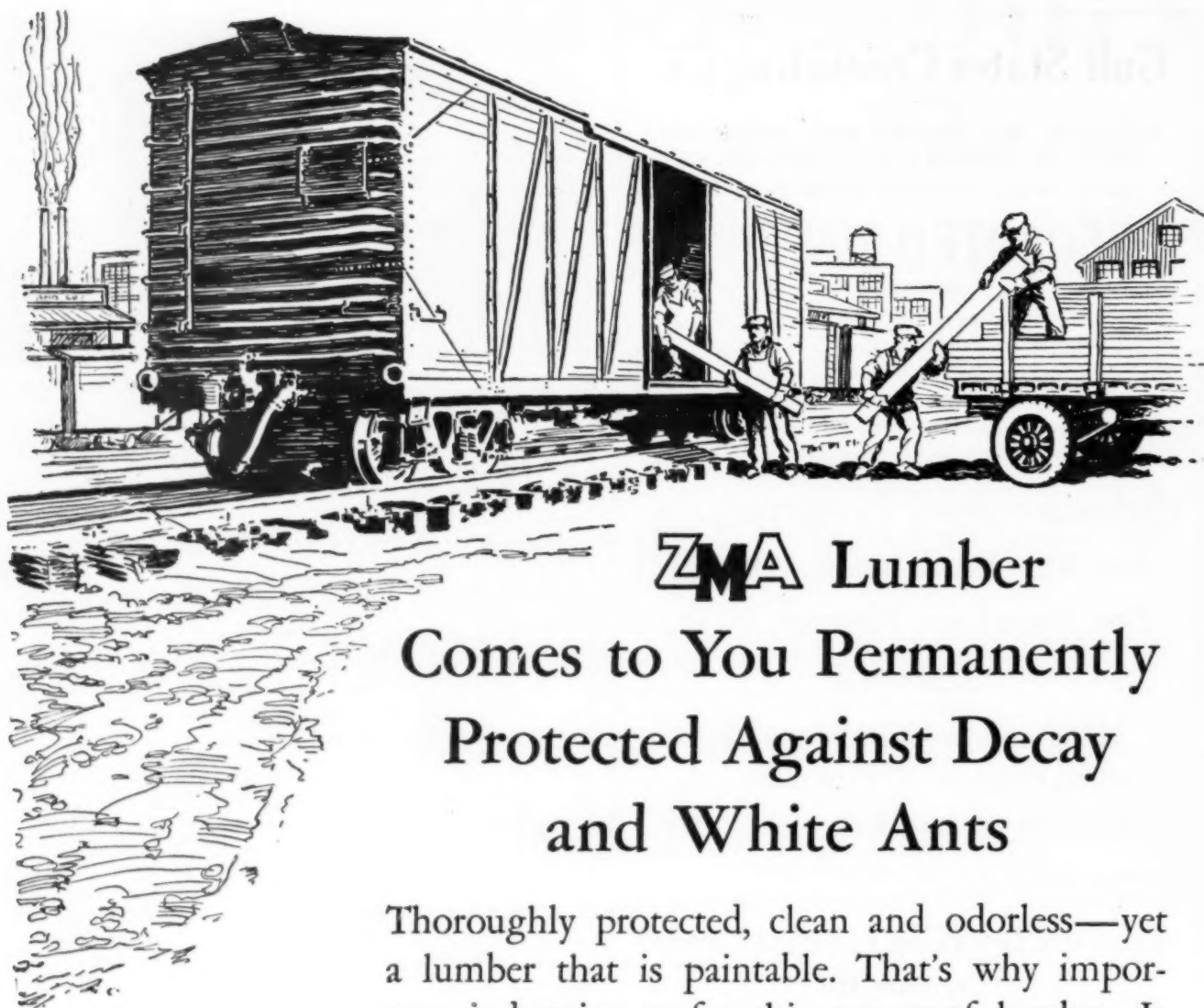
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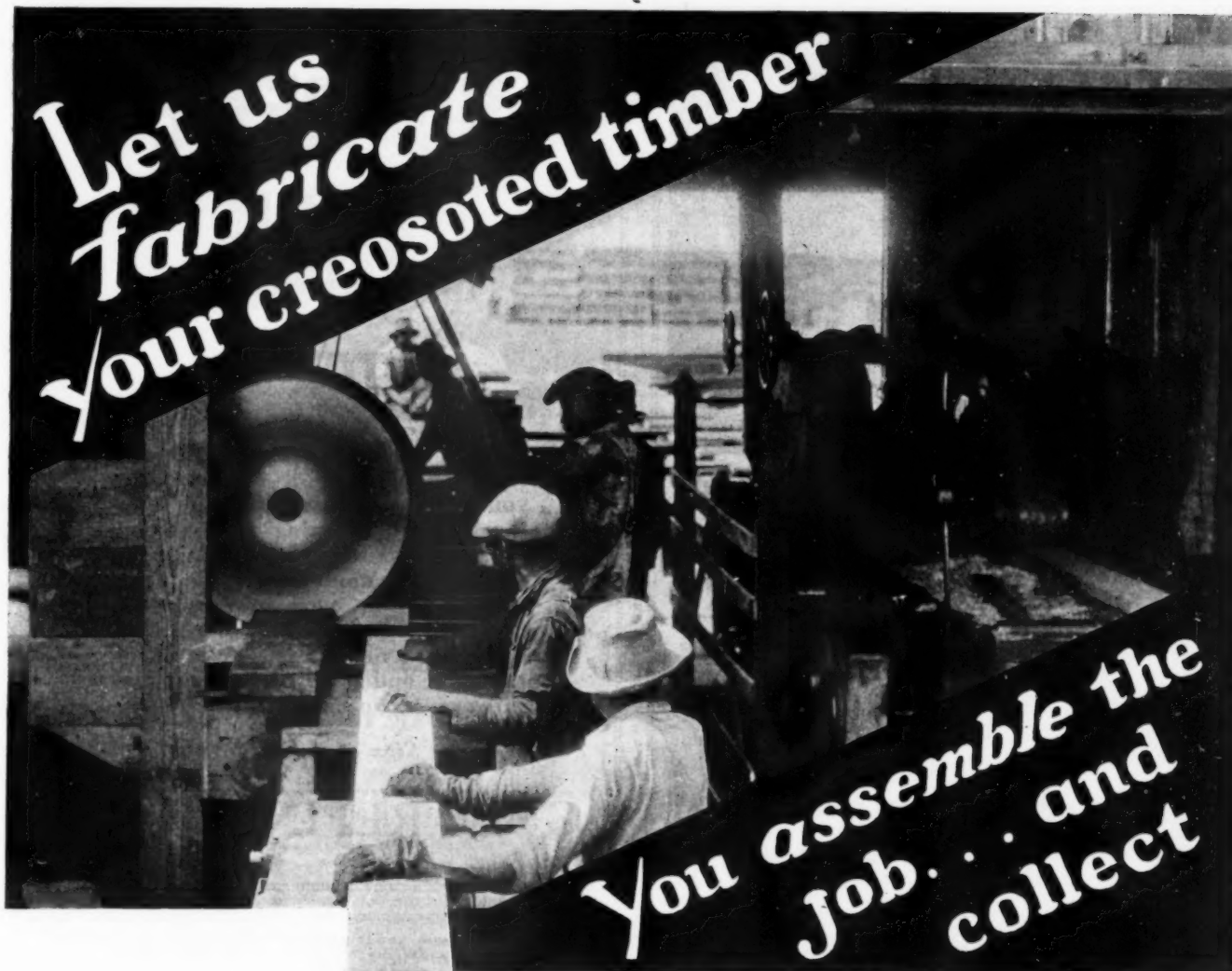
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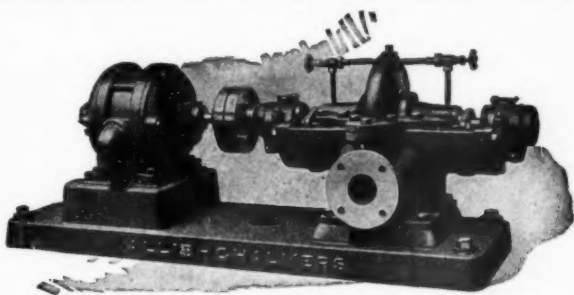
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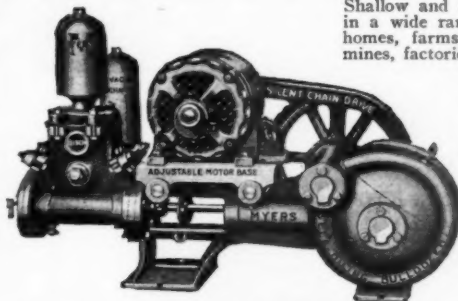


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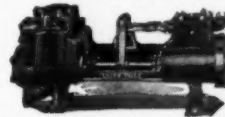
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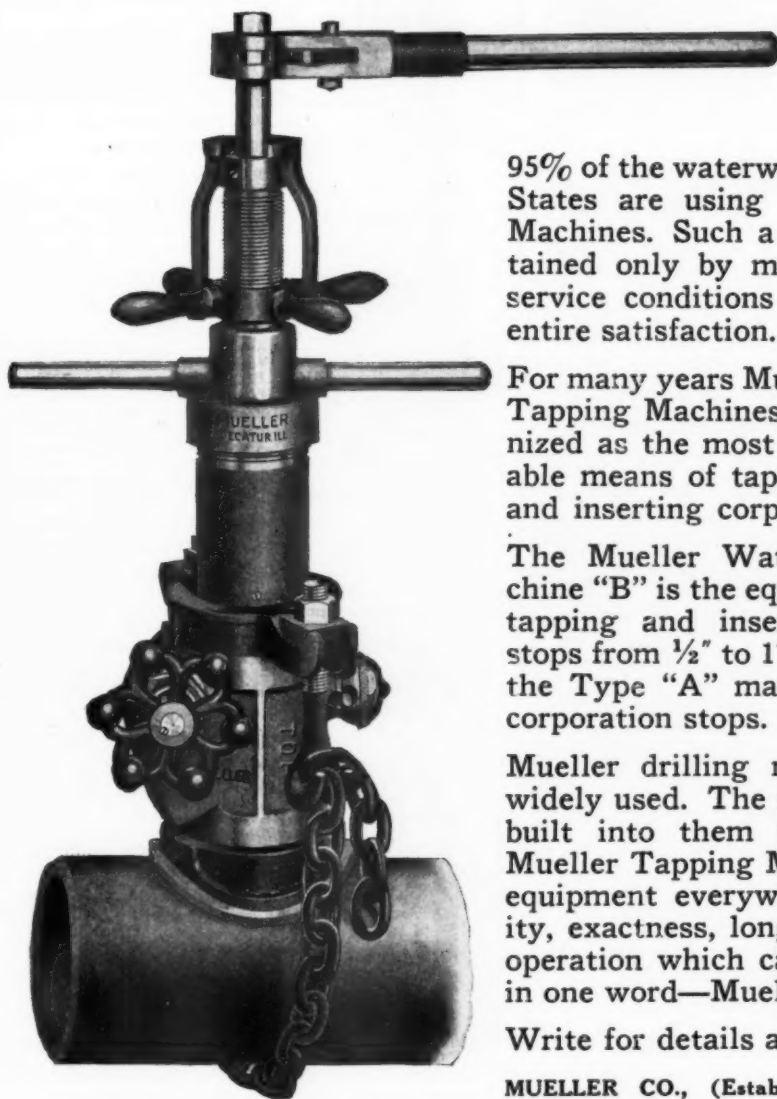
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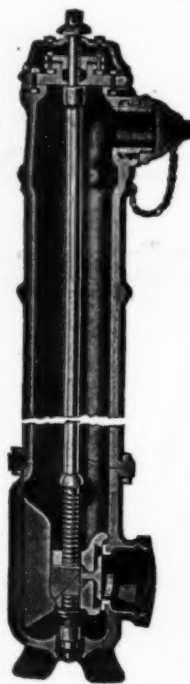
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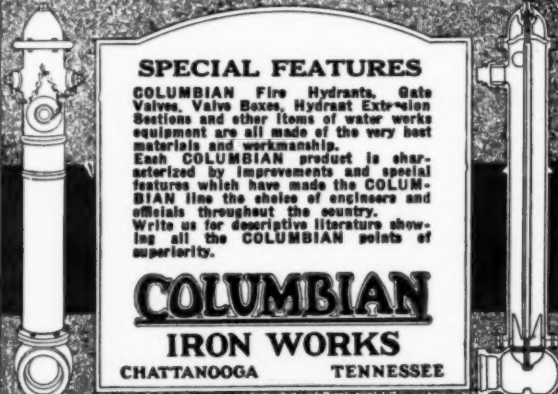
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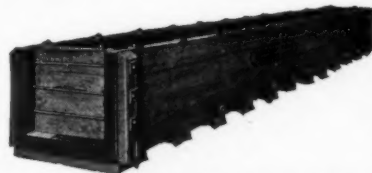


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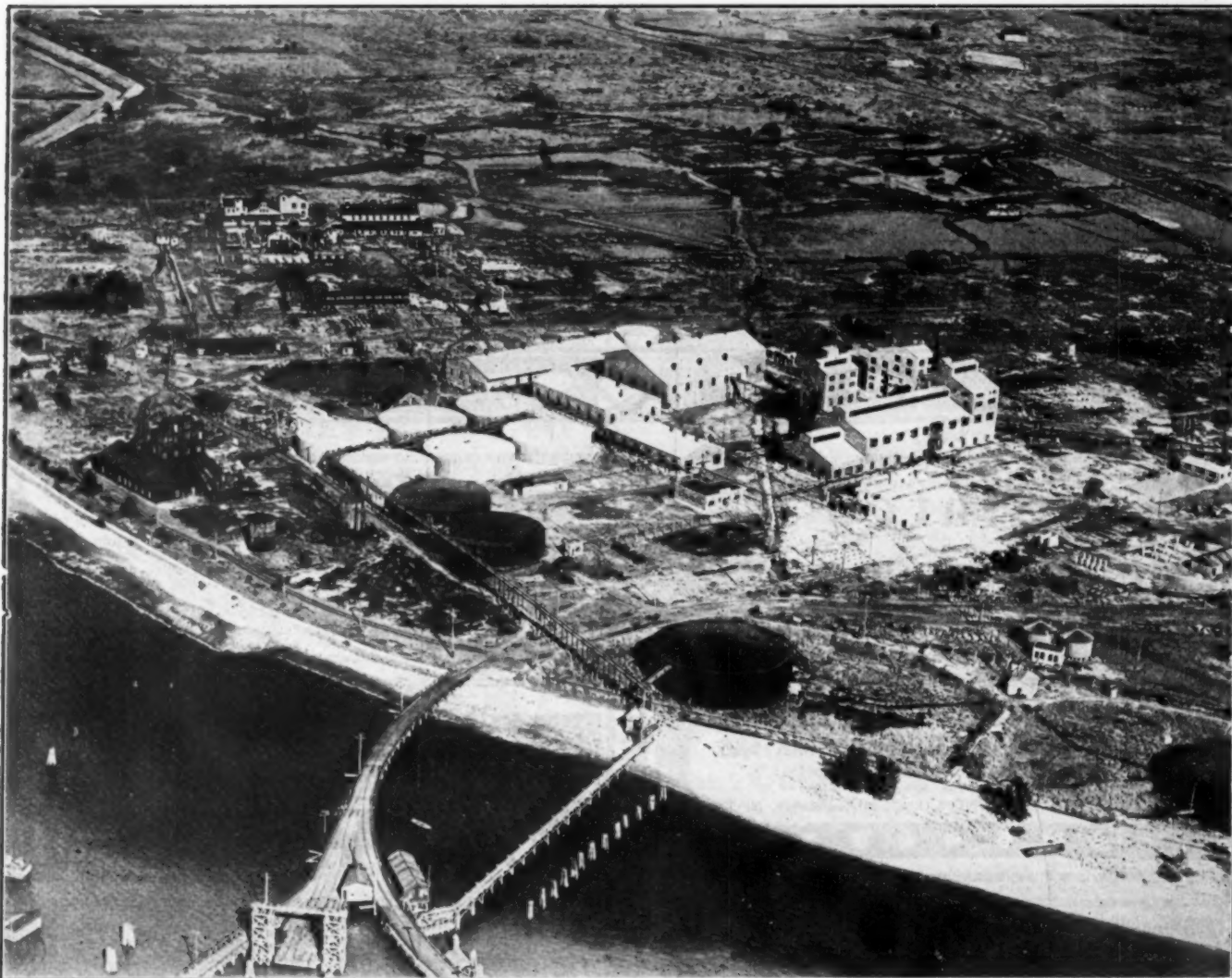
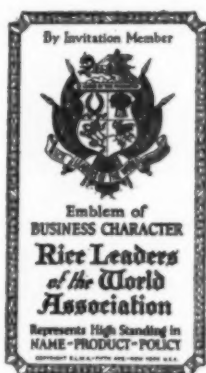


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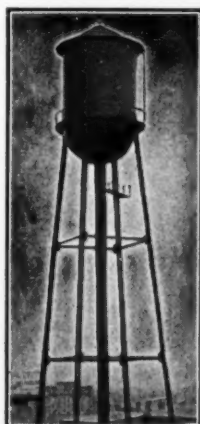
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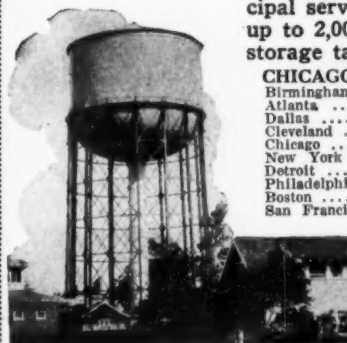


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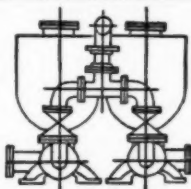
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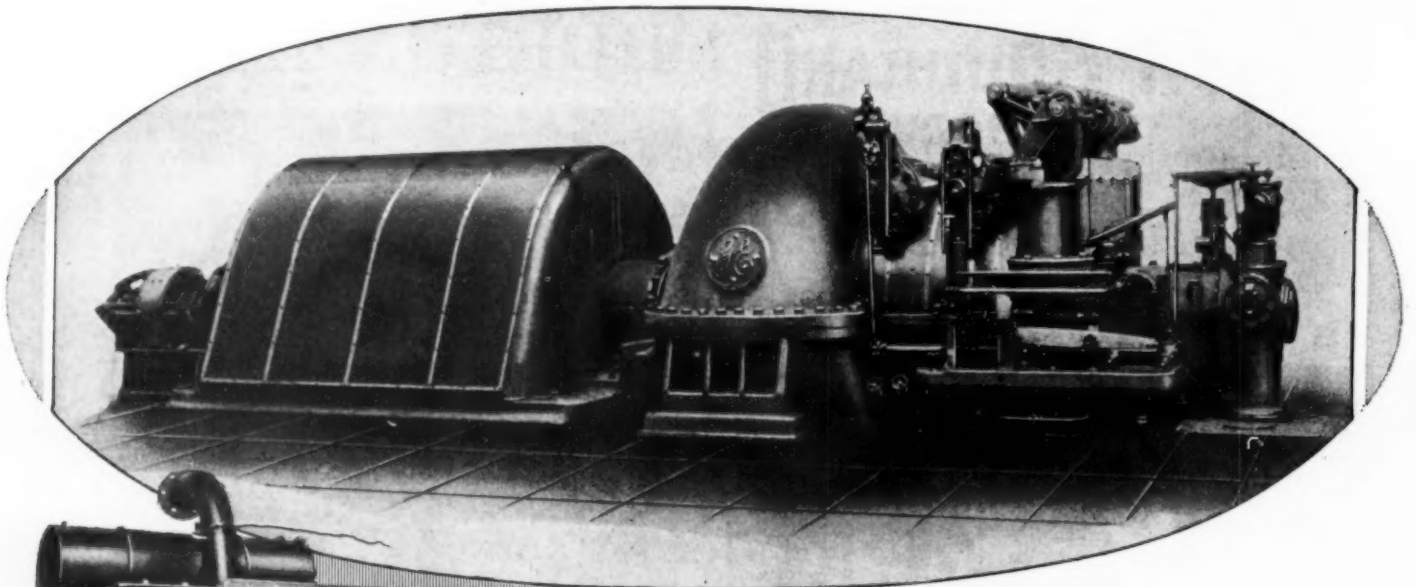
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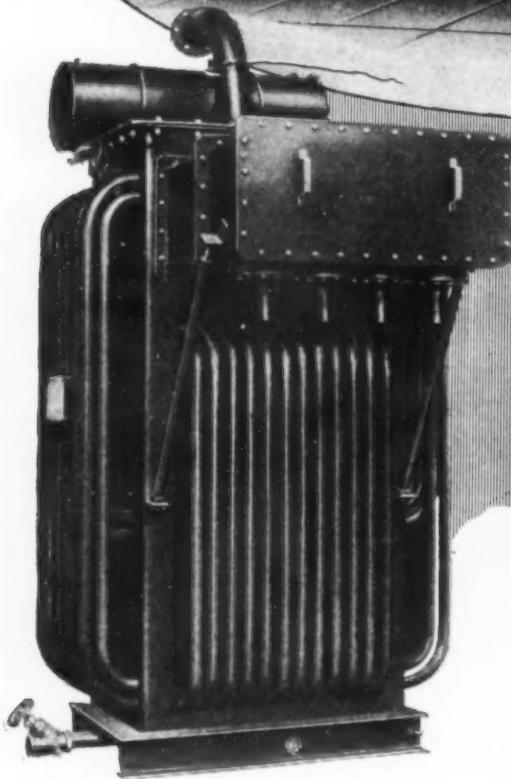
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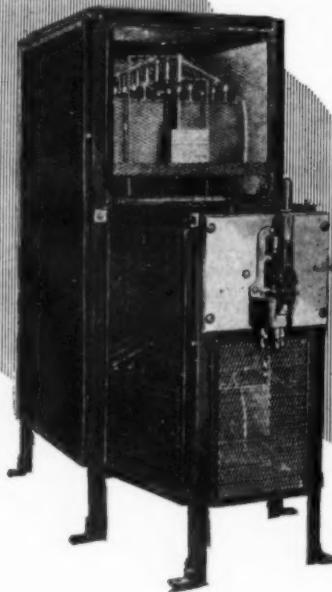
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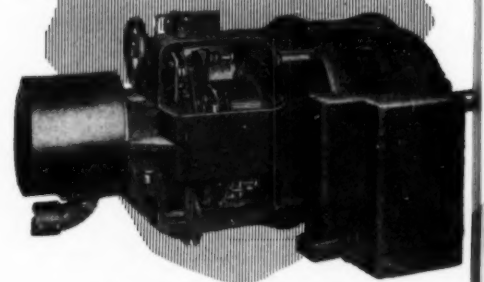
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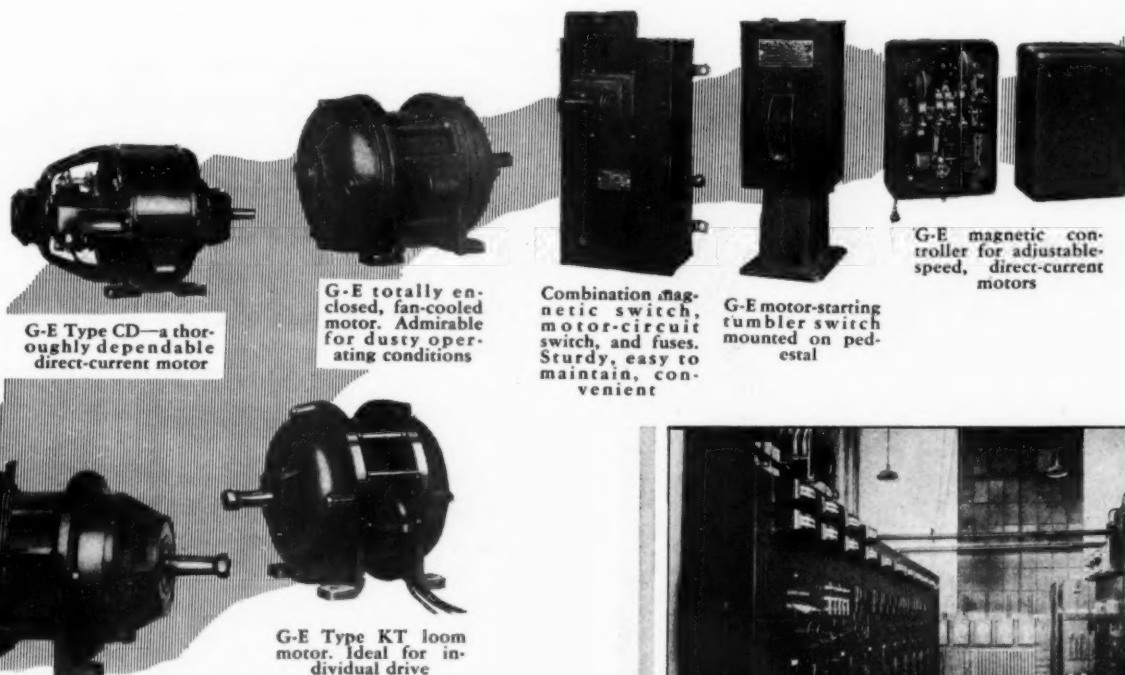
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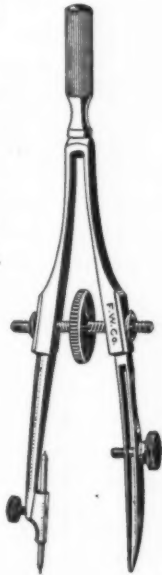
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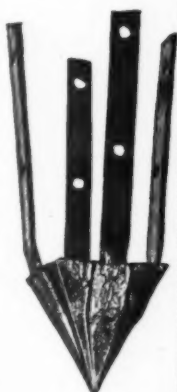
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Baltimore, Md., April 24, 1930

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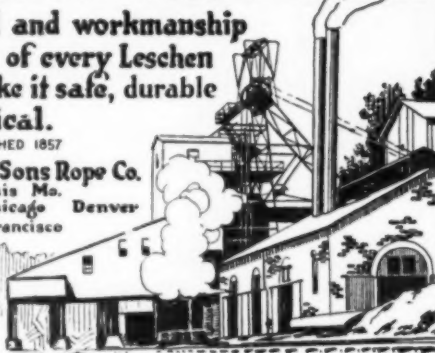
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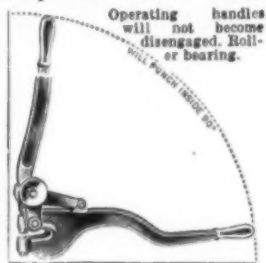
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Vol. XCVII No. 17 }
Weekly }

BALTIMORE, APRIL 24, 1930

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Communities Can Help Speed Public Building Program

THE editorial in the MANUFACTURERS RECORD of April 3 entitled, "Hastening of Public Construction of All Forms Badly Needed," has stirred up much comment and hearty approval, and has called forth a number of pertinent comments and suggestions. One reader makes the point that every man put to work on a construction job consumes materials which must be supplied by other men in various building supply trades, while his wages set still other men to work, providing himself and his family with the things they need and are now able to pay for. The number of unemployed is variously estimated at from 3,000,000 to 5,000,000; and if we assume that the actual figure is half way between these extremes, and that the average wage lost is \$25 per week, the total loss is \$100,000,000 every week. Building construction that would take up a fourth of the unemployed would require building materials, and would distribute wages, sufficient to provide work for most if not all of the remaining three-fourths of present unemployed.

As far as the Federal Government is concerned, under President Hoover's leadership it has made a prodigious effort to speed up all construction work, and many a man is drawing wages today who would be idle otherwise. Still, as one of our correspondents points out in commenting on the editorial of two weeks ago, in a good many cases "even after appropriations have been made, and plans put out by the Government, the work has been held up for re-bidding or has been withdrawn from the market to be bid later." It is equally true that in some cases, where the Government was ready to proceed, petty local squabbles over the site, over the material to be used or over some other detail, has held up the work. There is a division in the Department of Commerce today that has been at work since December trying to speed up work on public buildings. The most vexatious delays it has to combat are those caused by small but vigorous local interests striving for some personal advantage. The delay may be due to the merchants on one side of town fighting those on the other side over the location; to some local land owner, strong politically, who wants to sell his land at a good price for the site; to a producer of a particular sort of building stone who thinks his product should go into the building. A private corporation can select a site, pay a price or refuse and go elsewhere, design its buildings and select the building materials, according to its own best interest; but let the Government start something, and citizens who have anything to sell or any personal inter-

est in the matter, one way or another, immediately begin pulling political wires. One of the most fruitful causes of delay is the necessity of buying half a dozen or a score of small lots from as many private owners, through condemnation proceedings, to make a site for some big building. And this is one that can scarcely be eliminated. Imagine what would happen if the Government should try to railroad such suits through the courts.

The matter of speeding up Federal buildings, therefore, is not always in the hands of the Federal Government. Where such jobs are held up, possibly committees of local citizens could be organized to help iron out the difficulties and give the Government a green light. The Government itself dare not put too much pressure on these cases.

One reader comments, "I have found that in Baltimore where the Pennsylvania Railroad Company has made arrangements to go ahead with its tunnel in the spring of 1930, they are now postponing it for a year. Work authorized by Congress ten years ago is not ready to go out for bids. Certainly the work for which appropriations were voted years ago are the items that should be speeded up. Construction business is at a very low ebb, particularly in this section, and the Government would have an opportunity of getting its work built more cheaply and at the same time would be taking care of a great many of our citizens who are in great need of work at this time."

It is hard to account for delays of ten years by any of the reasons for delays advanced in this editorial; and certainly our correspondent's advice is sound when he says, "I think the President's attention should be called to this, as a great many prominent men went to Washington and gave the President their promise to start things moving. A check should be made by the Department of Commerce at Washington to see whether those prominent men who promised the President to start work have actually done it or postponed it as the Pennsylvania Railroad has done."

In the field of private work, Julius Barnes says:

"The most important single factor of recent development has been the increase in the supply and reduction in the cost of money available for residential building. While this cannot be said to be the case in every community, it is true of most. It is likewise true that prices and terms for materials and equipment for such construction are as favorable now as they are likely to be for any coming period of months.

"We support the conclusion that prospective home buyers should seek to satisfy themselves that money conditions, construction costs and other local factors are now favorable to a decision to proceed without delay with plans to buy or build residences."

FOR A SANE DISPOSITION OF MUSCLE SHOALS

IN looking at the Muscle Shoals problem some members of Congress have evidently been unduly influenced by revelations of lobbying activities, and the press of the country seems to be similarly influenced. In seeking a solution of the problem it will be unfortunate if we permit ourselves to lose all sight of certain tried and accepted fundamentals.

This country, except for a small but alert and active minority, is definitely committed to the principle that the government must not perform those activities which private industry can efficiently carry through; and private industry has very definitely demonstrated its ability to harness our rivers and put them to work.

In ten years, it is said, no private industry has made a satisfactory bid for Muscle Shoals. Well, what is a satisfactory bid? What basis have we for determination? Are we to demand a return on all the money the government poured into that war-time emergency plant? If so, we certainly cannot hope for cheap power under either government or private operation. Are we to have cheap power? Then we will have to charge up to the expenses of the war a considerable part of the cost of the plant. But how much? The power companies and the politicians cannot agree. If the power companies set a fair figure, the politicians dare not admit it is correct. If the politicians set a figure pleasing to constituents, the power companies will say it is too high. The result is—"no satisfactory bid"—and lobbying serves merely to obscure the real issue.

What, then? Government operation, say some Congressmen, disgusted with the long delay and anxious to get the matter settled one way or another. But we are not yet ready to admit that this country is unable to solve the problem in a sane and rational fashion, and we have a suggestion to offer.

Why not appoint a commission (yes, we have the temerity to propose another temporary commission) to be composed of one or two army engineers intimately acquainted with the property and its construction, one or two civilian engineers from consulting practice and of unimpeachable standing, and a business man of the highest ability and standing and not tied up with power interests—and charge them with responsibility for an appraisal of the value, not the cost, of the plant. Their appraisal would determine the figure on which the government might reasonably expect a return. They might, also, devise a plan for coordinating the other plants projected for the river. Their appraisal would then be a basis on which private industries could bid, and it would provide Congress with a basis on which to consider all bids.

Such a commission, headed by a retired army engineer, provided the basis for legislation on the Boulder Dam project. The findings of that commission have never been seriously questioned, and they provided a basis on which Congress promptly discharged its duties in the matter. We respectfully suggest a similar plan, with suitable modifications, for settlement of the Muscle Shoals controversy.

Since the foregoing was written, a copyrighted article by Mark Sullivan, in the New York Herald Tribune of April 17, predicts continuation of controversy on government operation and he states that the problem of Muscle Shoals development, which has been with us for 12 years, will be a problem for "two years or more and then some."

However, we believe the way has been opened for appointment of a special commission, and the need for such a commission is emphasized by the impasse into which the controversy has been thrown, for the Senate has passed a bill designed to bring about government operation for the sake of government operation in principle, while the House Com-

mittee is preparing a bill designed to bring about lease, properly safeguarded, to private interests. If the House bill were based upon the facts developed by the suggested commission, it would command a greater public support and have a much better chance for success.

OLDEST BANK PRESERVES ITS INDEPENDENCE

THERE appears on another page in this issue a striking and significant advertisement by the Bank of New York and Trust Co., which says it is the oldest bank in the United States. It is the first financial institution in America to have used "Trust Company" as part of its title. Alexander Hamilton wrote its Constitution. It was founded in 1784. That is significant in itself, but it is not the most significant thing about this advertisement. In a day of consolidations and mergers, which are affecting the mercantile world and the banking world alike, and when some of us are pausing to ask if they are always wise and always best, it is interesting at least to read this announcement from the oldest bank in the country that it is "firmly convinced that the interests of its customers and future customers can be best secured by the preservation of the independent position of the bank."

One can fully appreciate the pardonable pride of a great institution in not wanting to have its identity lost in a merger with other interests. When any business can point to a long and honorable record of achievement, when it can show that through the years it has rightfully met every responsibility, having grown with the growth of the country, and having created a niche in the economic life of the nation second to no other in its field of endeavor, it deserves to retain an identity which men have learned to value so highly. In these days of rapid change we are likely to throw aside tradition and proven methods, but when they are utilized to strengthen a foundation upon which modern business management expects to better serve its customers, then we are taking a solid step toward attaining the goal of business which should be to serve humanity profitably while making a profit itself.

J. B. DUKE'S BENEFACTIONS

G. G. ALLEN of New York, chairman of the Board of Trustees of Duke University and president of the Duke Power Company, in an address in Charlotte recently paid high tribute to the remarkable abilities and the humanity of James B. Duke, whose endowment of Duke University and many hospitals and churches in the Carolinas stands as one of the monumental contributions for human betterment. Mr. Allen calls attention to the fact that during 1929 the hospitals of North and South Carolina received from the Duke fund \$600,000, representing \$1.00 for each free bed day for each one served by these hospitals during the year. Large contributions were also made to various churches and to other interests in the Carolinas.

Though Mr. Duke accumulated a vast fortune, he dedicated practically all of it to the welfare of his fellow man. Would that all other rich men accumulating their millions, or tens of millions, would feel moved to follow the example of Mr. Duke. Mr. Allen said he had had the privilege of meeting some of the great men of this generation, and the privilege of knowing somewhat of great men of the past through reading their biographies, but the greatest man it had been his privilege to know in person "was the man who adopted and put in motion the ideal to which I have been referring, James B. Duke."

SOUTHERN STATES COULD PROFITABLY FOLLOW EXAMPLE OF UNITED STATES FOREST SERVICE

THE United States Department of Agriculture has advertised for sale to the highest bidder a production of 2,000,000 cords of pulpwood from national forest reserves in Colorado. In view of the South's interest in paper-making and reforestation, the plan on which the Forest Service of the Department of Agriculture will secure a perpetual supply of pulpwood and saw timber from the Colorado forests is of prime interest to all Southerners. In its announcement the Department states that:

"If this timber is sold, Colorado will come into the field for the first time as a large scale producer of pulp timber. Operations under the contracts offered would increase the total annual cut on the national forests of Colorado by approximately 50 per cent. The national foresters in the state would permit a 400 per cent increase in the cut without removing more timber than the natural growth would replace.

"The operation has been planned so that it can continue indefinitely, covering in rotation a number of tracts large enough so that after the cutting of the last tract the first will be ready with a second crop.

"Two units make up the 'chance' which the Forest Service is now advertising, one on the south fork of the Rio Grande with an estimated total of 1,025,000 cords of Engelmann and blue spruce and 215,000 cords of white and alpine fir, and the other on the upper Piedra River with 800,000 cords of spruce and true fir. Each unit includes sawtimber, consisting of Douglas fir, western yellow pine, limber pine and bristle cone pine."

What can be done in Colorado can be done more advantageously in the South, for two reasons. First, forests will grow more rapidly there. Second, the supply is nearer to large markets. In fact some advance is being made in the South in perpetuating its forest resources.

In the South are millions of acres of land listed as "cut-over forest land suitable for growing pines for naval stores and pulpwood"; but much of this land has been so thoroughly denuded of all pines, and so impoverished by repeated burnings over, it is not restocking and can never restock naturally because no pine trees are near to scatter the necessary seeds. The only way to get any revenue from such lands will be to restock them by artificial plantings, and then wait 20 years or so for an income. A private corporation cannot afford to pay taxes and wait so long; the taxes would eat up the profit in advance. Much of such land reverts to the states for delinquent taxes, and pays the state no revenue. The state, therefore, could well afford to take title to such land and restock it at its own expense, the prospect of getting a revenue in 20 years being preferable to the prospect of never getting anything from it. To the state, the expense would be slight, since it would pay no taxes and would forego none that it would otherwise receive; whereas to an individual or private corporation, the taxes that the state would exact would be the prohibiting factor.

Writing on this subject in the United States Daily recently, J. S. Holmes, forester for the state of North Carolina, makes some practical suggestions on one phase of the problem. He says:

"There has been an alarming increase in the amount of land advertised for delinquent taxes in the last few years, which supports the contention that many landowners are realizing the unprofitableness of at least parts of their holdings. There is no practical way for landowners to get rid of these unprofitable acres and still retain the parts of the farm from which they are making their living. * * *

* "Counties should be authorized, but not required, to take over for taxes the poorer parts of delinquent tracts at a

fair valuation. * Such areas should be acquired in fairly compact groups which could then be declared county forests.

"These lands should be held permanently by the county and properly managed for the production of timber or other forest products, for recreation, water protection, or the protection of wild life. * * *

Possibly some such plan could be followed or a graduated tax levied and applied on such declared reforested land when it began to be a revenue producer.

BETTER COTTON BALING WOULD SAVE \$50,000,000 ANNUALLY FOR SOUTHERN FARMERS

THAT presses for the round baling of cotton can now be bought outright by ginneries instead of operating them only under a license system, eliminates the one great obstacle which for years made many people fear the round bale system might become a monopoly. It is now possible to banish the barbarous baling methods of the South's cotton which have cost this section hundreds of millions of dollars. For generations the importance of better baling of American cotton has been urged upon the South. Edward Atkinson, the noted New England political economist of former years, dubbed the method of handling American cotton as more barbarous than that of any other product of importance known to mankind. Even India and Egypt, two cotton raising countries whose people are among the poorest in the world, bale their cotton in a way far superior to the methods used for American cotton.

One of the mysteries of the ages has been the way in which the South has handled its cotton, loosely pressed and badly baled, badly handled at the gins, the bales badly covered, often left out in the rain and mud for weeks and sometimes for months—a disgrace to the whole cotton handling business, a wasteful practice from beginning to end.

About a third of a century ago the round bale system was developed whereby the cotton was so well covered that Mr. Atkinson named it the "Underwriter's Bale," because it was not inflammable, the air being excluded as the cotton batting was around a cylinder. Against this system the vested interests in gins and cotton compresses brought all the power of their financial and business influence to bear, but in the third year of its active operation the company put out over 900,000 round bales, and then the movement was temporarily halted.

Steamship lines gave a lower freight rate than on the square bales, insurance was lower, and though much more cotton in weight in round bales than in square bales could be put in a freight car, the railroads refused to make any reduction in rates, doubtless due to the influence of the compress interests.

It has been claimed, and probably correctly so, that a better baling of cotton, such as that which was inaugurated by the round bale system, would produce a saving to Southern farmers of not less than \$50,000,000 a year.

Perchance the Farm Board may be able, in connection with the work of the Department of Agriculture, to bring about some united, determined effort that the American cotton crop shall not be handled as barbarously as in the past and in the method of packing and shipping shall not rank so far below the cotton from all other cotton growing countries. This situation as it stands is a serious reflection on the cotton growing and cotton handling interests of the country. It is a crime to continue such wasteful methods in this era of efficiency. In view of the importance of better cotton baling we are giving in this issue a brief history of the round bale system and advantages claimed for it.

MEAT PACKERS AND THE WHOLESALE GROCERY BUSINESS

THERE is nothing in the nature of concealment about the bulletins which Armour & Company are sending out in an effort to educate public opinion to concur in setting aside the consent decree by which the packing companies were enjoined from engaging in collateral lines of business, and it is therefore a perfectly proper and legitimate effort. Whether their objective is wise and for the best interests of the country, remains for the country to decide—after reading the arguments on both sides.

The second bulletin, entitled "Helping to Reduce the Nation's \$8,000,000,000 Annual Bill for Waste," refers to the estimate, made by a committee appointed by President Hoover while Secretary of Commerce, that in the distribution of products in this country we annually waste \$8,000,000,000. The bulletin makes the point that a large part of this waste is due to a failure to take full advantage of the distribution facilities at our command. It points out that "Three-fourths of the marketable live stock of the country is raised west of the Mississippi River, while the most important meat consuming centers are east of the Mississippi River"; and it quotes the Chicago Journal of Commerce as saying that:

"The packers possess a vast system of distribution, reaching the greatest cities and the remotest village. Their refrigerator cars go everywhere; their warehouses are to be found in every part of the country; they have sales organizations that are unsurpassed in point of adequacy to the task at hand. All these facilities could profitably be used for distributing many commodities in addition to meat and its close associates."

To this, Armour & Company add:

"They could be used, for instance, for distributing other food products such as vegetables, fruits, cereals, canned goods and grocery staples which have to be brought from the farms to the towns and cities.

"Why should they not be used since there is space to spare which, if used, would make possible cheaper distribution not only of meat but of other foods?

"At one time it was believed that business should be confined within hard-and-fast, artificial divisions; the meat packer should be confined to packing meat, the cigar store should be confined to selling cigars and the drug store to retailing drugs. But, as the Chicago Journal of Commerce points out:

"Conditions have changed. Innumerable business lines have overleaped their original bounds. Cigar stores sell lunch, and groceries sell cigars and cigarettes. Drug stores sell everything. The mail-order houses are drug stores on a larger scale; or, to put it another way, they are nation-wide department stores, selling not only by mail but directly by large branches, and establishing special stores for certain products, such as automobile tires. But while the business world in general is overleaping boundaries, the packers are rigidly delimited, so that a splendid system of distribution loses much of its potential value."

The company asserts that "Many farmers' organizations and a substantial section of the press which speaks for the farmers and for the consumers have emphatically urged that these benefits be extended by permitting the fullest possible use of the packers' facilities in the distribution of other food products," and it closes with the statement that "manifestly, public interest as well as that of the packers demands that this be done."

We like the frankness of the manner in which the company is presenting its arguments. There is about the bulletin none of the concealed inspiration that has characterized so much of the propaganda with which the public has been deluged in recent years. The arguments, therefore, deserve careful and unbiased consideration.

The company makes a plausible case. If it could ship large quantities of other food products in space now wasted in its refrigerator cars, evidently economies would be secured.

If such economies are passed on to the public the packers' case would be strong indeed.

If the great and powerful packing companies go into the grocery business, buying and selling a great variety of products now dealt in by other dealers, it will mean a drastic readjustment in the entire field, and doubtless the elimination of a good many dealers. The public interest is ruthless, and sympathy for unnecessary middlemen has never stopped any readjustment that promised cheaper living. The grain and cotton dealers and the commission merchants see the handwriting of the Federal Farm Board for a good many of their number. Chain stores have eliminated many individual retailers. If the packers can effect a great net benefit for the country by handling products now forbidden them, they should be allowed to do so, but before we permit such a large-scale reorganization of the food distributing system, we should be pretty sure that the net result will be beneficial.

ARKANSAS GOES AFTER NEW INDUSTRIES BY FINDING NEW MARKETS FOR EXISTING PRODUCTS

WORKING on the indisputably sound theory that the best way to attract new industries to the State is to point to industries already thriving and expanding there, the Arkansas State Chamber of Commerce is undertaking to find new markets for the manufactured products of Arkansas plants. The Arkansas Gazette recently said:

"The latest move of this sort by the State Chamber was to broadcast an inquiry through local Chambers of Commerce and business men for Arkansas plants making folding chairs, bent wood chairs or the bent wood from which such chairs are made. The state organization had established contact with an Eastern mercantile concern handling hundreds of thousands of chairs of these types annually, and it took this method of acquainting possible producers in Arkansas with the existence of this larger market.

"The State Chamber of Commerce recently found an outlet in another state for a special type of hardwood handles for agricultural implements, and obtained an agreement from the manufacturer to purchase his handles in Arkansas if our producers could meet the price he is now paying. As a result of this exploring work, a number of Arkansas handle makers are submitting price quotations to the manufacturer. By similar investigations, a market for a metal specialty made by a single Arkansas producer may have been opened with a big distributing concern that would furnish thousands of dollars worth of new business if it should stock the article in all its stores. And by establishing contact with a contractor, the Chamber turned an order for two carloads of drain tile to an Arkansas producer of clay products."

Such activity, if it never brought in another industry, would add materially to the prosperity of the State. But it is not possible for Arkansas factories to run at a high level of prosperity without demonstrating to other sections the advantages of an Arkansas location. If the Chamber of Commerce is able to materially widen the markets for existing industries, statewide growth will inevitably follow.

S. J. HIGH, president, Peoples Bank and Trust Co., Tupelo, Miss., writing to the MANUFACTURERS RECORD of the constructive work being done in that territory, says:

"We have been preaching diversification for 15 years very strenuously and we are now getting results from our efforts. We are shipping chickens and eggs each week into New York City; selling whole milk to the Carnation Milk Condensary, and selling cream to our creamery. We made the largest cotton crop in our history last year, have full corn cribs, and we have shipped a good deal of corn out of the county."

As a result of this constructive effort Mr. High states the general opinion is that the surest way to prosperous farming is self-sustained farming.

\$50,000,000 Annually Wasted by Our Barbarous Cotton Handling Methods in Contrast With the Round Bale System

The Manchester Cotton Association, Ltd., has recently made a statement to the officials of this Government strongly protesting against the present barbarous system of handling our cotton. The secretary of that Association in his protest said:

"The ink used in marking the bales runs into the cotton, *canvas* (italics ours) is torn and the entire bale appears as though handled in a haphazard manner, and has not shown improvement in spite of agitation for a neater package. The neatly packed bales received from every other cotton growing country are in striking contrast to the American bale."

"REGARDLESS of the present disadvantages and difficulties as to the development of the system of round bales for cotton, which I have thoroughly tested in my mill, the round bale will eventually become the dominant cotton baling system," was a statement made to the editor of the *MANUFACTURERS RECORD* by the then president of the New England Cotton Manufacturers Association, now known as the National Cotton Manufacturers Association, many years ago when the round bale system was under development.

At that time the development of the round bale system aroused extreme opposition from the vested interests owning compresses in which some of the railroads were supposed to be largely interested.

The first acquaintance of the *MANUFACTURERS RECORD* with the round bale invention came when Jerome Hill, one of the big cotton handlers of that day, came into the office of this paper and said: "I have just seen in Waco, Texas, a system of baling cotton which

puts on the scrapheap all of my interests in cotton compresses."

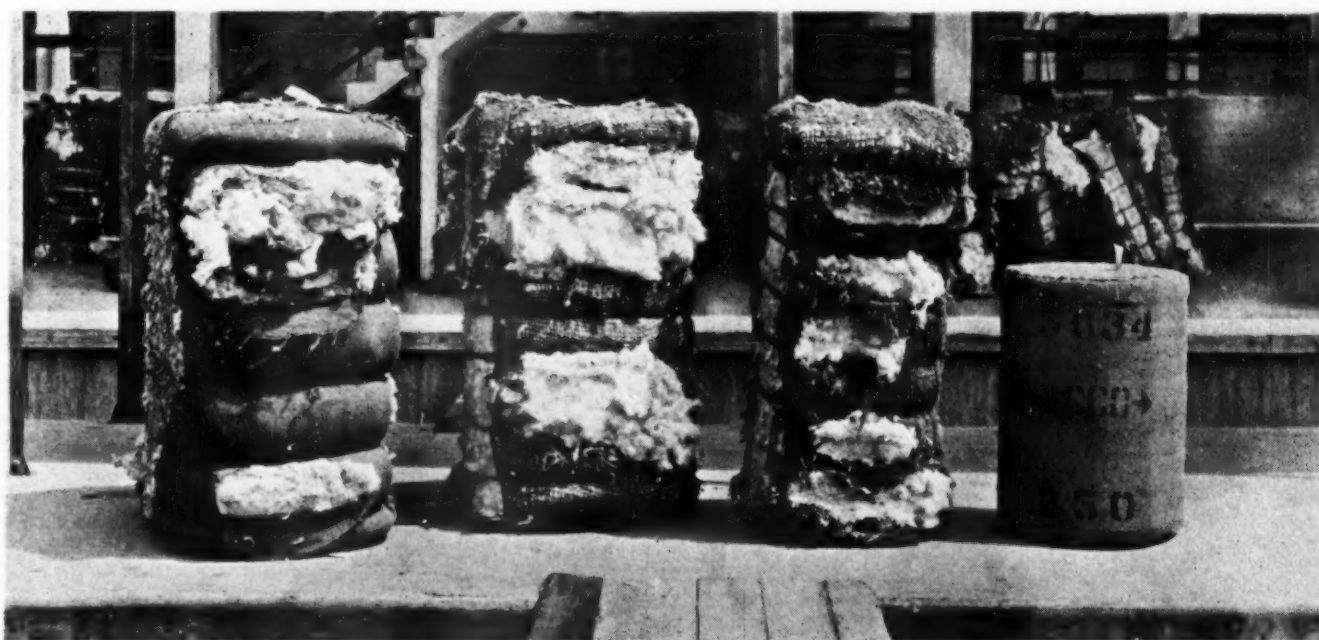
After hearing Mr. Hill's views as to this invention, which was that of the round bale system, a staff correspondent was sent to Waco to investigate and make a report. Later on when several patents on round bales had been brought out, they were combined into one company under the leadership of John E. Searles, at that time the treasurer of the American Sugar Company and one of its earliest promoters. Mr. Searles became so thoroughly interested in the round bale plan that he made a trip through the entire South, investigated the handling of cotton and saw what Edward Atkinson of Boston had claimed to be the "most barbarously handled agricultural product in the world."

Mr. Atkinson became enthusiastic over the round bale because of its non-inflammability. It was covered with heavy material, automatically wound around the bale as it went through the cotton gin. Its density when it was turned out of the gin was greater than

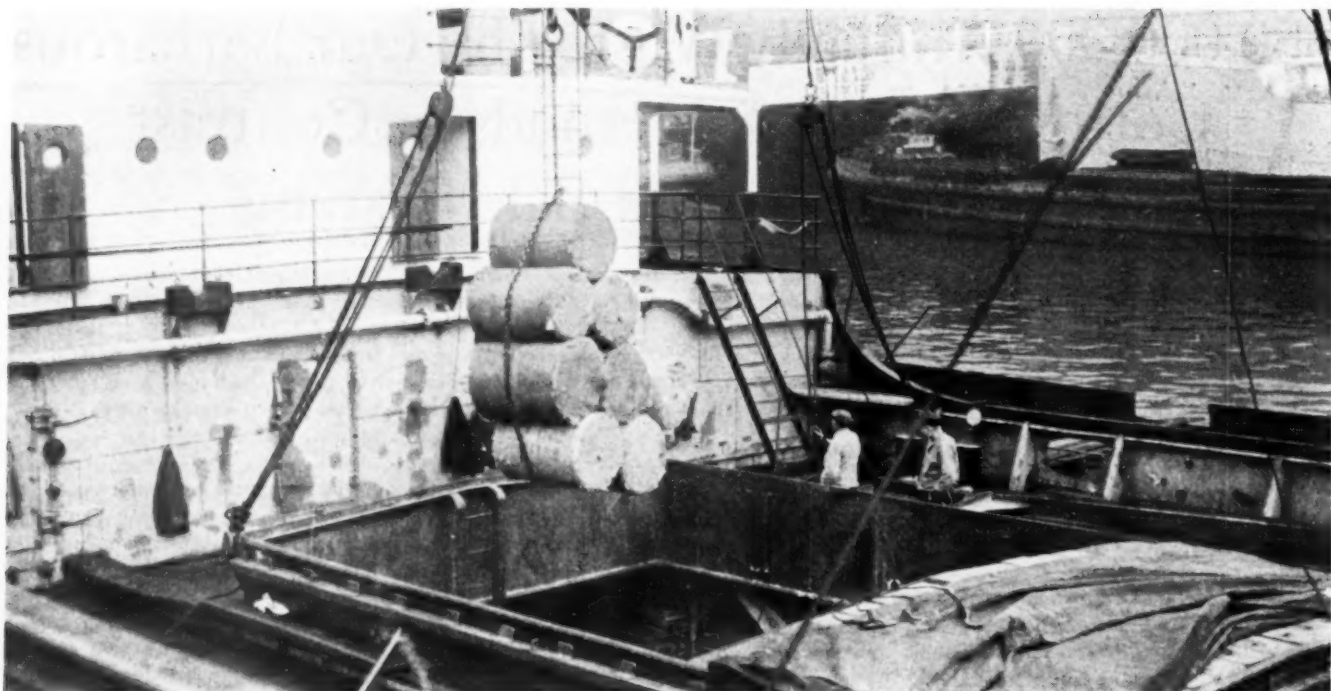
that of the square bale at that time. It was vigorously and aggressively fought by cotton gin people and by owners of cotton compresses. A ginning paper in Texas, purporting to be wholly in the interest of cotton gins, waged a ceaseless war against the round bale system on the ground that it would destroy all of the independent gins. It was supposed to be a paper published wholly in the interest of gins but some years afterwards the editor of that paper, during that campaign, said to the *MANUFACTURERS RECORD* that he was simply employed by a big cotton house to run the paper in a redhot fight against the round bale system. We believe that house is not now in active operation.

Mr. Searles who was one of the brainiest and most far seeing business men we have ever known, a great power in the business and financial world, determined to withdraw from all other connections and concentrate his activities upon this method of baling cotton.

So much stir was made by the introduction of the round bale system that a



A Striking Contrast—Three Typical Square Bales and a Round Bale.



Showing Excellent Condition of the Round Bales as They Are Unloaded at Bremen.

bill was introduced into the Mississippi Legislature and actively advocated, though we believe it was never adopted, to the effect that the round bale was so perfect that if it were permitted to continue in operation it would create such a monopoly in cotton as to greatly injure both the planter and the ginner. This was directly contrary to the plans of the American Cotton Company, but active agitation of that kind, the opposition of compress interests through the railroads, and the financial interests,

resulted in the bankruptcy of the company.

In the third year of its active operation the company put up about 900,000 bales of 250 pounds each. Notwithstanding the fact that these bales were not inflammable and that in carrying them there was no danger from railroad sparks or from any burning on the platform, and that a railroad car could carry a far larger amount of cotton in round bales than in the old barbarous square bales, the railroads refused to

give any lower rates on the round bales than on the square bales. European steamship lines eagerly grabbed at the opportunity of handling the round bale in preference to the square bale, and gave much lower freight rates. In handling this kind of cotton they felt safer from the danger of fire, and they could pack much more of it in the same space and, therefore, granted to the round bale business a lower rate than Southern railroads were willing to grant to it. The result was that nearly all the



This Is Not an Unusual View, But Shows Bales As They Appear in Average Run of the Day's Business.

round bales were shipped to Europe to the great advantage of European mills over American mills.

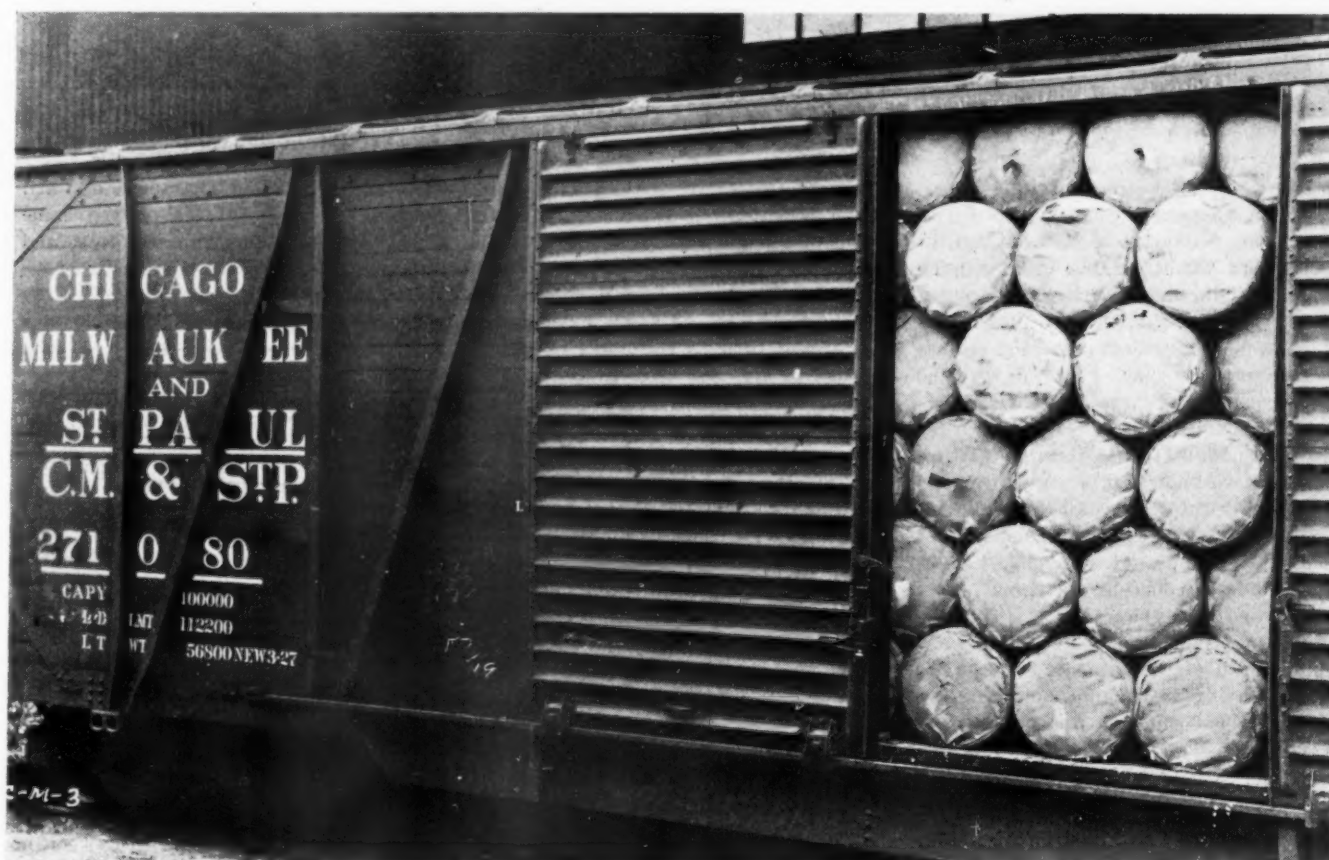
The inside story of the fight against this improvement over the old method of baling is of thrilling interest if space should ever be available to go into full details.

A few years ago Anderson, Clayton & Co., of Houston, one of the largest cotton houses in the world, undertook to revive the system of putting up round bale cotton. They met with the same unwillingness of railroads to give them

treated and handled as cotton. The methods which have prevailed are a disgrace to all modern business development. Covered with jute, torn in many places, often lying out in the rain and mud for weeks and sometimes for months at a time, American baled cotton puts this country to shame in comparison with the cotton baled in every other part of the world. India and Egypt, with all their backwardness as compared with America, bale their cotton far better than we do. It has been estimated by competent authorities that

oxygen the fire would die out. As a result of this test Mr. Atkinson named the round bale the "Underwriters Bale," and enthusiastically advocated its universal adoption.

As the round bale is now making some considerable progress and is being vigorously pushed by Anderson, Clayton & Co., we present a few photographs contrasting the old square bale with the round bale. One illustration, which is a fair sample of how the American cotton crop is barbarously baled shows three regulation square bales standing



Record Carload of Cotton, 480 Round Bales Weighing 125,818 Pounds.

lower freight rates than on the square bale, but they found a willingness on the part of steamship lines to give a lower rate to foreign ports and, therefore, most of the cotton which they have put up in the round bale has been sent abroad.

In view of the progress being made in the re-development of the round bale system and the recent vigorous complaints from England about the barbarous methods which have prevailed for a century in the compressing and packing of American cotton, it seems appropriate to touch briefly, as we have done, on the origin of the round bale and the fight that was made to suppress it.

It has long been recognized that there is no other leading agricultural product in the world that is as barbarously

the methods which now prevail for the compressing, baling and shipping of the cotton of the South cost the farmers of that section at least \$50,000,000 a year. It is difficult to exaggerate the conditions under which Southern cotton is compressed and covered with inflammable bagging.

Edward Atkinson, as the president of a mutual fire insurance company, operating largely in cotton, put the old round bale to many tests as to its inflammability, and had some small frame sheds built of pine and round bales put in them. The sheds were burned, but no material damage was done to the cotton, for the way in which these round bales were put up excluded oxygen to such an extent that even a hot fire would cause only the burning of the outside layer, and by reason of lack of

alongside a round bale. It is difficult to imagine anything in greater contrast.

Concerning the view showing the ragged condition of the covering on a number of bales, Anderson, Clayton & Co. write: "This photograph was taken in the regular run of a day's business, without the bales being selected in any respect whatever. We are not at all proud of the condition of them, but nevertheless the picture presents a story that leaves nothing untold."

Another view illustrates the facility with which cotton is loaded on steamships when packed in round bales. This shows the unloading of cotton at Bremen and the good condition in which the round bales were received.

Yet another view shows how the round bale cotton is loaded into a railroad car. Referring to the amount of



Small Warehouse and Platform Affording Protection to the Bales From the Weather.

cotton that can be loaded into a car, Anderson, Clayton & Co., commenting on what was then the record carload in 1926, said: "This instance prompted the idea of conducting a carloading contest, made in 1927, 1928 and 1929. The photograph under consideration shows the ultimate outcome. It stands today as the record car of Acco Bales (which is the brand under which the round bales are now handled), and for that matter, as far as we know, is the record carload of cotton in the United States. The 480 Acco Bales in that car weighed a total of 125,818 pounds. This furnishes something indeed concrete to think about with respect to the inability to secure any recognition in railroad freight rates that is most certainly justified in equity by the saving in car miles and release of equipment for earning additional revenue."

At Memphis, Texas, one very modern gin, not owned by Anderson, Clayton & Co., represents an investment of approximately \$75,000, an amount in this one gin plant greater than the capital stock of banks of many small towns. It is a far cry from the gin as it was conceived by Eli Whitney to this present day application of the principle which he established.

Unless some better system can be devised, and none ever has been, the handling of cotton can by this method be so improved that the discredit which for ages has attended the barbarously handled cotton of the South will give way to a better system of ginning, baling and marketing of cotton to the enormous advantage of our whole cotton business.

At the time when the American Cotton Company was making such a vigorous campaign to introduce the round bale, the railroads which refused to give lower freight rates though they could carry far more cotton packed in round bales than in the old square bales, and

run much less risk of fire, gave as a reason that if they did so they would be putting a premium on the development of this system as compared with the old method of ginning cotton and shipping it back and forth to compress points, and then to the ports or to the railroad yards, and that this would be an injustice to the old methods. Surely such an argument ought not to be permitted to prevail any longer. It is a discredit not merely to the South, but to the whole country, that our country in the world's market should rank in packing and compressing so far below the cotton of all other countries, even of the ones which in our proud boast of advancement we think are almost uncivilized and very backward in modern improvements.

Anderson, Clayton & Co. are to be congratulated on the fact that they have recently reached the conclusion to offer the Clayton Round Bale Press for outright sale, this change having taken effect on April 1. During the time that the press under their ownership was in more or less of an introductory stage of development they felt, like Mr. Searles, that all purposes could be best served and the ultimate best welfare of the system would be better taken care of by keeping the whole matter of distribution of the presses under a much closer supervision and observation that had been made possible by a lease plan of operation than could have been accomplished in any other way. But as it has now become evident that the press is mechanically developed where its satisfactory operation is feasible, there is no longer the occasion that formerly existed for its being desirable that the firm should retain the title to the presses.

This will mean that the press is now practically thrown open to the public, and thus the fear of possible monopoly which formerly existed will be wiped out. However, where it is preferred by

the ginner, Anderson, Clayton & Co. will continue to lease presses on the same terms and conditions as heretofore, and thus there will be no change for those who would prefer to continue operating under the lease plan. Writing on this Anderson, Clayton & Co. say:

"It is true that we have realized all along that if the Clayton Round Bale Press is to accomplish its potential usefulness to the cotton industry, as we believe to exist, that its distribution should conform to the usual custom with respect to any other machinery, by outright sale to the users of it.

"These are the reasons that have prompted us to make the change in our policy of distribution and we believe that you will recognize that there is reasonable cause to believe that the scope of its usefulness will be broadened and better purposes generally will be served thereby."

It is because we believe that the round bale system is thus placed in a way where it can be of such enormous service to the country, saving we think at least \$50,000,000 a year to the cotton growers and ultimately making it impossible for foreign buyers to criticize the baling of American cotton as barbarous as the justified statement of the Manchester Cotton Exchange, that we are thus covering the history of this epochal change in cotton handling.

\$625,000 School Bonds Sold

Wilmington, N. C.—Three bond issues aggregating \$625,000 have been sold by New Hanover County to Darby & Company, New York, at par and premium of \$7625. The bonds will bear an interest rate of 4¾ per cent and are divided as follows: \$28,000 county funding bonds, \$242,000 school funding bonds and \$355,000 school building bonds. Funds from the building bonds will be used to make extensive improvements to schools in the county, including the enlargement of the present high school building here or the construction of a new building.

Progress Made in Forest Protection in Southern Alabama

Some By Products of Conservation Movement Which Have
Promoted Developments and Brought Wealth to State

By DAVID HOLT, Mobile, Ala.

Encouraging evidence that forest fire prevention is making progress in the cut-over pine counties of southwestern Alabama has been reported by the Alabama Forestry Department. Two fire towers were recently dedicated in the northern and western sections of Mobile county and a third tower is to be erected.

The greater part of the pine land in southwestern Alabama and southeastern Mississippi is still under non-resident ownership. Land owners have generally realized for a number of years that their interests lay in the way of fire prevention and reforestation, though it is only recently that they have been receiving substantial cooperation from the resident population in carrying out such measures. Families owning cattle on the open range realize to what extent they are dependent on the lumber and naval stores industries for a portion of their livelihood after those industries begin to disappear.

Recently a body of reforested pine land that had been protected for 50 years sold for \$300 an acre, including stumpage which made it a good investment at that price.

Several large areas in Washington county, particularly those bordering on swamps of the Tombigbee river and its tributary creeks, have been consolidated into forest and game preserves. Conservation of forest resources and wild

life is the motivating force behind the most successful of these projects, of which there are 20 or more notable examples in the southern part of Alabama. One is that of the Tombigbee Hunting Club, which is well stocked with game and has a valuable second growth of pine in the hill sections, and hardwoods in the swamps. Incidental results of bringing the men composing the Hunting Club membership to Alabama must be entered to the credit of this conservation effort, for capitalists came to hunt and fish and remained to invest and improve. Rufus G. Dawes of Chicago is a charter member and was the first president of the club. The Dawes family, including the former vice-president, now Ambassador at the Court of St. James, have made many investments in and near Mobile as a direct result of their visits to the Tombigbee club for sport. On the Baldwin county shore, they are developing the Old Spanish Fort site, where the last great battle of the Confederacy was fought.

Walter H. Jewell of New York, Colonel Clement Studebaker, Jr., and Hiram H. Maynard of Chicago, and other men of large affairs in national finance have been brought into active participation in Alabama developments as a direct result of the Tombigbee Club's appeal to their sportsmanship and conservation instincts. There are 20 or more of these men who attend the annual hunts, killing off surplus bucks and gobblers. They

have returned as much game to the property as they have taken off. Larger bucks have been sent from Northern preserves, with the view of breeding up the stock of native deer; some hundreds of wild-turkey eggs from Pennsylvania will be hatched under hens this spring, the turkeys turned loose in the woods when half-grown, and numerous members of the quail family have been released. The creeks and spring-fed lakes have been stocked with bass and bream, and grain crops are planted each year to be harvested by quail and doves. In the entire operation, the slaughter of game and catching of fish is treated as secondary to the main idea of creating a game refuge and preserving the forests.

Across Mobile bay, in Baldwin county, the Tennessee Coal, Iron and Railroad Company has made many additions to its original 35,000 acres of cut-over pine land held and protected for reforestation. The state highway north from Cochrane bridge over Mobile bay passes for several miles along one edge of this area that has been protected from fire for about eight years. On the other side of the road is pine land of the same character, cut over at the same time, and from which the fire has not been kept. The difference between the stand and condition of the trees on the protected side and the unprotected area gives a practical lesson of the value of forest protection.

\$13,958,000 UTILITIES EXPENDITURE

Louisville Gas and Electric Company and
Oklahoma Gas and Electric Company
Have Big 1930 Budgets

Outlining its 1930 construction budget for the Louisville Gas & Electric Company, Louisville, Ky., operating in Kentucky, and the Oklahoma Gas & Electric Company, Oklahoma City, Okla., operating in Oklahoma and Arkansas, the Bylesby Engineering and Management Corporation, Chicago, controlling these properties, announces that the former will expend \$4,300,374 during the year and the latter \$9,658,348. Major construction projects to be undertaken by the Louisville Gas & Electric Company

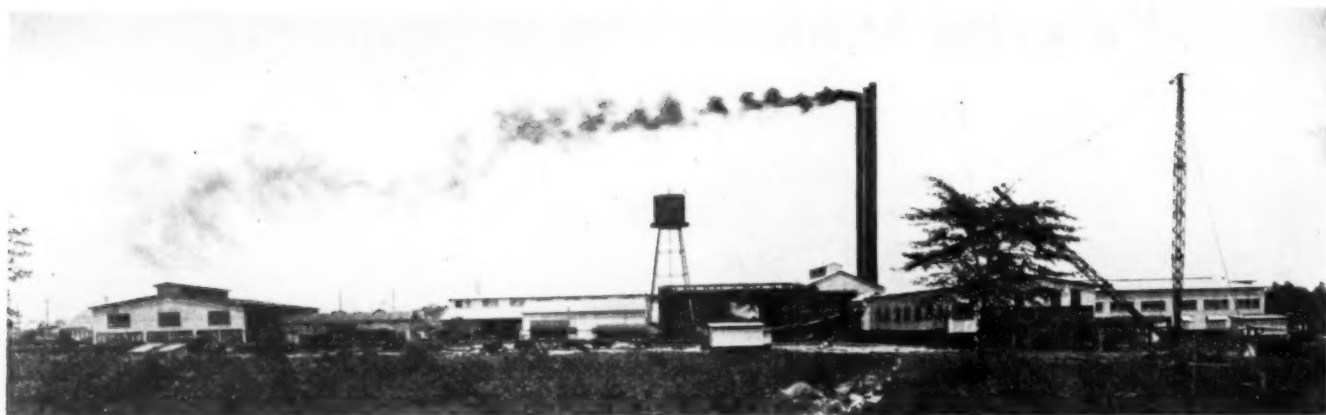
include an interconnecting transmission line from Louisville to Cincinnati, involving an estimated expenditure of \$1,750,000; the extension of the underground distribution system in Louisville to cost \$222,000, and a high tension connection between the Ohio Falls plant and the Waterside steam plant, involving the expenditure of \$100,000.

Important construction projects to be undertaken by the Oklahoma Gas & Electric Company include the completion of the Belle Isle steam plant, \$3,576,000; completion of the Beerbower steam plant, \$261,000; completion of additional boilers at Horseshoe Lake plant, \$328,000; completion of Cushing Tap substation, \$159,000; Oklahoma City 66 kv loop and switching stations, \$585,000; Oklahoma City service building,

\$325,000; 1000 kw Diesel unit at Shattuck, Okla., \$155,000; extension of underground system in Oklahoma City, \$151,000, and the installation of a 10,000 kva synchronous condenser at Maud.

\$500,000 Clubhouse Planned

Howey-in-the-Hills, Fla.—Miss Margaret Hoover and Miss Kerney Spencer, Evanston, Ill., are promoting the organization of the Club Valencia here to erect a \$500,000 clubhouse on the shore of Lake Harris, near the Hotel Floridian, and to purchase a 250-acre orange and grapefruit grove. Membership in the club is limited to 250. The proposed clubhouse will be of Spanish architecture and is expected to be ready for use the coming season.



Brooklyn Cooperage Company Manufactures Stock for the Sugar Industry

A New Woodworking Center— *Sumter, South Carolina*

By F. J. KNIGHT and J. J. RILEY, Sumter Board of Trade.

SINCE the ending of the World War, agricultural prospects in Sumter County, South Carolina, have decreased year after year, due to heavy boll weevil infestation and to deflated land values. But in the dying of the old order, a new order of things has sprung into being and in the short space of a few years the city has become the home of many wood manufacturing and allied plants and now bids for a place as a furniture-producing and woodworking center. In an effort to develop industrial payrolls every week of the year instead of depending on the highly speculative and uncertain returns from cotton, the one principal agricultural crop, woodworking and kindred plants were induced to locate in the community, with the result there are today something like a dozen plants of this type in production. There is still abundant opportunity, however, for factories for finished goods.

The Wateree and Santee River swamps form the western boundry of Sumter County, broadening as they extend southward into expansive areas of timber made up of red gum, black gum, white oak, red oak, ash, maple, cypress, tupelo and cottonwood. Railroads provide convenient facilities for bringing the logs from these swamps into Sumter where they are manufactured into hardwood lumber, much of it utilized here in making bedroom furniture, cabinets, desks, handles, coffins and novelties.

The great forests of pine timber, formerly very profitable, have been largely cut, but types of wood suitable for making finished goods and products can be obtained in Sumter at all times, providing an unlimited supply of dimension stock, veneer, plywood panels and furniture cores. This means that the plants are able to operate with less machinery and without fear of this timber supply

becoming exhausted in the near future.

Sumter's location near the source of supply, therefore, is a major factor in woodworking operations. The city is also well situated as to shipping, having four railroad lines; the Atlantic Coast Line, the Seaboard Air Line, the Southern, and the Northwestern of South Carolina, entering and leaving in nine different directions. Sumter is only 90 miles from both the Charleston and Georgetown ports, making shipping by sea and river very convenient.

The Carolina Power and Light Company distributes power from high voltage lines of the Wateree River plant of the Southern Power Company and the Yadkin River plant of their own system. With the opening by the General Gas and Electric Company of their gigantic power development on the Saluda River at Lake Murray, 55 miles distant, a direct line which is now under construc-



Plant of Williams Furniture Corporation

tion will give Sumter double assurance of an unlimited and uninterrupted flow of power 24 hours a day.

A sufficient and dependable supply of American born labor, both skilled and unskilled, can be found at Sumter. The city has a bracing, mild and healthy climate and a pure water supply. It is an educational center. Splendid schools and churches, growing and developing year after year, are among the assets of the community. Three banks, two being members of state-wide systems and the other an independent institution, assure manufacturers of adequate and efficient financial service.

More than 150 miles of paved roads establish the city and county of Sumter as pioneers in the good roads movement.

Well equipped welding and machinery plants assure new concerns prompt service on short notice in repairing machinery, making castings and welding and other similar work.

gers for wardrobe trunks and traveling bags, being the first concern in the South in this field.

The Sumter Hardwood Company specializes in band-sawn hardwoods, red gum, tupelo gum, cotton wood, ash, cypress and white oak. The company owns

izes in cutting poplar veneer for cross banding purposes. Its output, about 25,000,000 feet a year, is sold to manufacturers of furniture, radio cabinets, pianos and doors.

The Brooklyn Cooperage Company, established here about a year ago, manu-



Sumter Veneer Company Plant



Galloway-Pease Lumber Company, Producing Hardwood Boards

Of the 11 plants that utilize hardwood products, all but one located here within the last few years.

The O. L. Williams Veneer Company manufactures approximately 12,000,000 feet of built up panels a year and more than 50,000,000 feet of single ply veneer. The company specializes in built up veneer panels for furniture, trunks and novelties. It also makes garment han-

dles and controls large tracts of timber, in which it conducts its own logging operations.

Burial cases, coffins and caskets, are manufactured by Witherspoon Brothers & Company and are sold in 34 states and abroad. Part of the business is conducted in the name of the Sumter Casket Company.

The Sumter Veneer Company special-

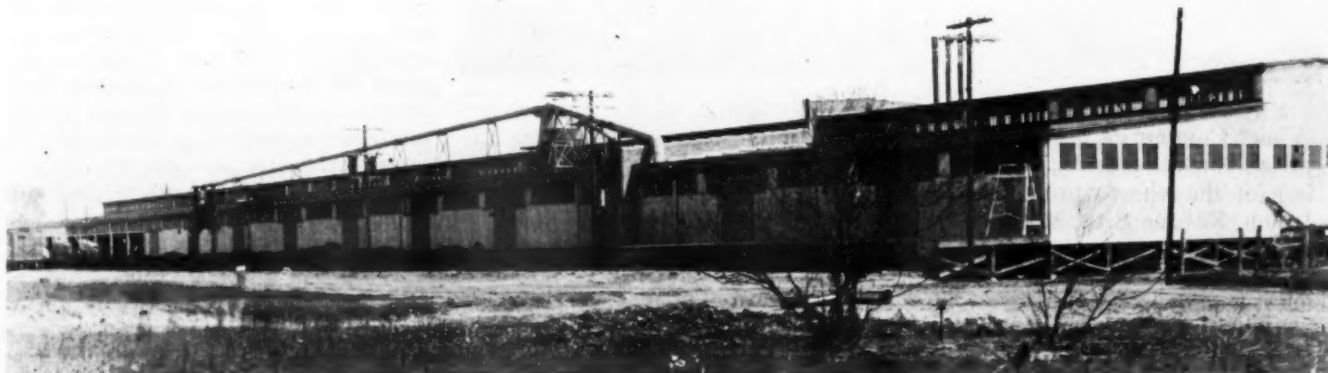
izes in cutting poplar veneer for cross banding purposes. Its output, about 25,000,000 feet a year, is sold to manufacturers of furniture, radio cabinets, pianos and doors.

The Galloway-Pease Lumber Company produces approximately 60,000 feet of hardwood boards daily, ash, cypress, gum, oak and maple being the principal woods cut. A plentiful supply of raw material for years to come is controlled by the company.

Cores for furniture and a good grade of bedroom furniture in all latest styles is the product of the Williams Furniture Corporation. The plant is capable of furnishing a carload of core stock a day for other cabinet and furniture plants, in addition to that used by its own finishing department.

The Nu-Idea Desk and Seating Company, established in 1929, manufactures school desks, teachers desks, tables, benches and chairs, and other items will soon be added.

The Sumter Wood Products Company has just commenced operations. It manufactures furniture dimensions and has a department for production of hardwood flooring, interior trim and mouldings. The Sumter Cabinet Com-



The Sumter Wood Products Company Manufactures Furniture Dimensions

pany will open in a few months and will make special furniture in conjunction with the Sumter Wood Products Company. The Korn Company, another of the group, is the exporting branch of the Sumter Hardwood Company.

Splendid openings exist for factories producing chairs, dining room furniture, refrigerator boxes, radio cabinets, kitchen cabinets and similar lines. With most of the plants employing male labor, there are opportunities for knitting mills, shirt factories, and other lines of manufacture using female labor, of which there is an abundant supply.

Survey Ozarks for Possible Pipeline Construction

Springfield, Mo.—A force of 120 employees will be brought to this city by Ford, Bacon & Davis, Inc., engineers of New York, who will establish offices in the Wilhoit Building for the purpose of making an exhaustive investigation and survey of the Ozarks region of central Missouri and other areas north of Springfield to determine the feasibility of pipeline construction in the district, according to reports here. The force will be in charge of William von Phul, Jr.

ROBOT RAILWAY FOR CEMENT PLANT

Trinity Portland Cement Company Installing Unique System.

Dallas, Tex.—Railway cars apparently operated without human agency will transport cement rock from the excavating pit to the crusher of the Trinity Portland Cement Company here, on a railway haulage system soon to be built by the company. A novel system of remote control devised by the General Electric Company, Schenectady, N. Y., will govern operations of the cars. Tracks on which the cars will run will be divided into a number of sections and four motor-driven cars, each propelled by two 50-horsepower, squirrel-cage motors, will be used, energy being collected from the track and an extra rail system. Switches in front of operators will control the delivery of energy to each section of track, two operators being so located that they may view the loading and unloading of the cars and their movements. By energizing all sections of the track, the cars will run from one end to the other and will be stopped by interrupting the current to the section on which the cars are traveling, electric solenoid brakes being used, the direction

of travel may be changed by throwing a switch. Squirrel-cage motors tend to maintain constant speed under all circumstances, it is said, and on down grades gravity will not speed up the cars, but will be converted into electricity, as the motors will then act as generators and the current fed back into the power system. Dump cars to which the electric drive will be applied are being built by the Atlas Car and Manufacturing Company, Cleveland, Ohio.

Illuminating Engineering Society to Hold Convention in Richmond

The twenty-fourth annual convention of the Illuminating Engineering Society is to be held in Richmond, Va., October 7-10, according to an announcement by the society, 29 West 39th Street, New York.

This will be the first national convention of the society to be held in the South. Present plans contemplate sessions to be devoted to Lighting Practice, Natural Lighting, Lighting Service, Ultraviolet Radiation, Lighting Education, Light in Architecture and Decoration, as well as the usual business sessions. The Committee on Lighting Service is planning to hold a pre-convention meeting immediately preceding the opening of the convention, to be devoted to subjects of particular interest and value to central-station lighting service engineers. This will be held Monday, October 6, and the convention will open officially on the following day.

6,000,000-Bushel Elevator Under Construction at Galveston



Steady progress is being made on construction of the Galveston Wharf Company's new 6,000,000-bushel grain elevator. All the wooden piling for sub-foundations have been driven, as well as creosoted piling for the wharf apron. The pile driving was done by E. A. Whitney & Son, Kansas City, Mo. Reinforced concrete superstructures, including head house and storage bins, are being erected by the Jones-Hettelsater Construction Co., Kansas City. Horner & Wyatt, Kansas City, construction engineers, are designers of this elevator, which upon completion will be one of the largest and most efficient grain handling units in the country. Provision will be made for berthing three ships at one time under spouts of the elevator, with maximum loading capacity of 200,000 bushels an hour.

"What's Ahead for Business?"

The 18th annual meeting of the Chamber of Commerce of the United States is to be held April 28 to May 1 at Washington, D. C. On April 29 and 30 a novel feature will be introduced in the form of a series of "Round tables," at which an effort will be made to determine, as literature issued about the conference puts it: "What lies ahead?" "What reefs and shoals will be encountered?" "From what quarter will fair winds rise?" "In what direction lies deep water?" These round table conferences are to be held at the various hotels in Washington to discuss separately such subjects as banking trends, construction, exporting, industrial development, water development, natural resources, industries, insurance, railroad transportation, retailing, taxation and trade practice.

At the general session called after the Amcham Dinner April 29 for members of the American Chambers of Commerce abroad, the topic for discussion will be business stabilization. Farm topics will be covered at the April 30 general ses-

sion, while the themes for the general sessions of May 1 include the "Nation's Tax Muddle" and "What's Ahead for Canadian Business?" Air transportation will be the feature of the luncheon on this latter day. Closing event of the meeting will be the annual dinner planned for May 1 at the Washington Auditorium.

Credit Men to Meet in South

Credit executives of the United States, at their annual convention in Dallas, Texas, May 12-16, will devote particular attention to proposals for revision of the National Bankruptcy Act, states Dr. Stephen I. Miller, executive manager of the National Association of Credit Men.

Col. William J. Donovan, former Assistant Attorney General, is scheduled to discuss the results of his investigation of bankruptcy administration. Harold H. Kase, Rochester, N. Y., chairman of the special bankruptcy committee of the National Association of Credit Men which has been conducting its study for more than a year, will follow Colonel Donovan on the program.

Hardwood Dimension Manufacturers Organize at Memphis

Memphis, Tenn.—At a recent meeting here of representatives of large producers of hardwood kiln-dried dimension stock, the Hardwood Dimension Manufacturers Association of America was organized to further the use of hardwoods mill-cut to consumers' requirements, the plan being to protect the buyer as well as the seller and to so grade the stock that there can be no question as to what is ordered or delivered. Officers were elected as follows: Parrish Fuller, Oakdale, La., president; D. B. Morgan, Black Mountain, N. C.; Eugene Horan, Houston, Tex., and C. S. MacLean, St. Louis, Mo., vice-presidents; C. E. Dosker, Louisville, Ky., secretary.

Bell Telephone Service to South America

Regular telephone service between North and South America has been inaugurated by the American Telephone and Telegraph Company; it extends to all Bell System telephones in the United States and all telephones in Cuba, as well as to all important points in Canada and Mexico. In South America it includes the telephones of Argentina, also Santiago, Chile, and Montevideo, Uruguay.

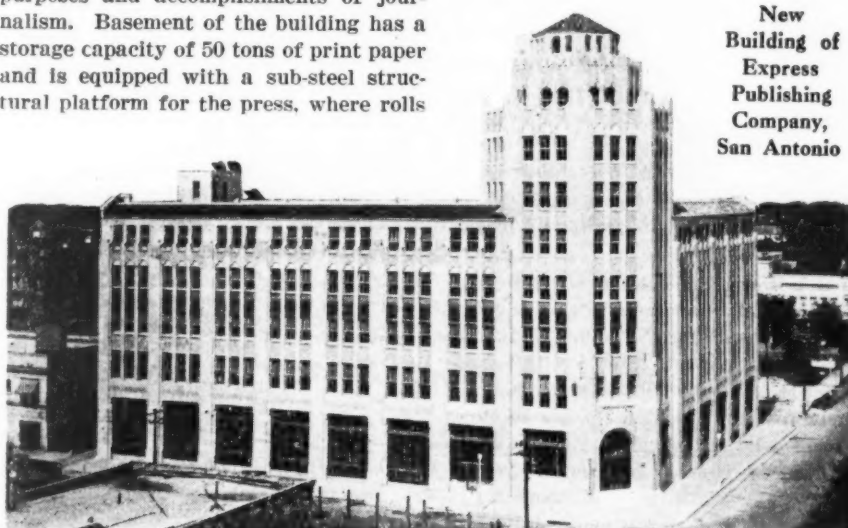
Calls are handled through "long distance" in the same manner as any other out-of-town call. When the operator answers, subscribers ask for the South American operator.

Modern San Antonio Newspaper Plant

Incorporating the latest principles of newspaper building construction, including many new and original features, the Express Publishing Company, San Antonio, Tex., Frank G. Huntress, president and general manager, recently completed erection of a modern newspaper plant to house the San Antonio Express and the San Antonio Evening News. The building is 9 stories, 141 by 188 feet, of reinforced concrete and Bedford limestone on two street fronts and of white pressed brick on the other two sides.

A carved stone plaque, from a model designed by Pompeo Coppini, American sculptor, decorates the arched entrance on the exterior; it presents allegorical figures in the relief, emblematic of the purposes and accomplishments of journalism. Basement of the building has a storage capacity of 50 tons of print paper and is equipped with a sub-steel structural platform for the press, where rolls

of paper are fed into the giant press immediately above. The basement also provides space for toilet and lockers, boiler room, electrical controllers, ink tank, storage vault for files, work room for electricians and mechanics and tracks for handling paper. Boiler room is equipped with two 200-horsepower boilers, with oil burner and specially designed gas burner, and a hot water system is supplied through a 1200-gallon storage tank. The building is heated by a low-pressure vapor system, the basement and first floor being heated with blower type unit heaters. Herbert S. Green, San Antonio, was the architect and the Jopling Construction Co., Dallas, general contractor.



New Building of Express Publishing Company, San Antonio

FOR FLORIDA TUNG OIL DEVELOPMENT

New York Industrialist Believes Industry Offers Large Profits

Gainesville, Fla.—H. W. Bennett, president of Wheatworth, Inc., New York, has arranged to plant about 2000 acres of Florida land to tung oil trees and has already set out 75 acres of year old trees in Marion County, near Weirsdale, where he has a nursery from which to plant 1200 acres of land he owns there. Mr. Bennett also purchased 1240 acres northeast of Gainesville and has a larger nursery there. The groves will be on high rolling land of deep soil and clay sub-soil, said to be free from lime and phosphate. The owner drilled 271 parts of the tracts, taking soil samples at various depths, which he says analyzed favorably for tung tree culture. He is of the opinion that this method of selecting soils for tung tree planting in Florida should be practiced

in every instance, as surface indications alone are not a proper guide. Tung oil development in the state may exceed in value that of the combined citrus industry, with larger profits and less risk, according to Mr. Bennett, while the development of by-products also promises to add untold values.

\$18,000,000 Expenditure for North Miami Beach

Miami Beach, Fla. — Development plans under way or soon to be started for development work in the north end of Miami Beach call for an expenditure of more than \$18,000,000 within the next 18 months, it is estimated. These figures include the Indian Creek Golf Club development to cost \$2,000,000; Dr. Joseph Adams' Sun Ray Club, \$2,000,000; Graham-Fisher-Briggs development \$12,000,000; new surf club, \$525,000; Sea Club, \$300,000; Hassler polo field, \$250,000, and Sunny Islands, \$1,000,000.

Southwest Foreign Trade Conference

Houston, Tex., April 19—[Special.]—The need for more adequate study on the part of Southern business men of our foreign trade possibilities, especially with Latin America, was emphasized at the meeting here of the Southwest Foreign Trade Conference. The conference organized permanently and decided to meet in New Orleans in 1931. There were some 500 delegates from all over the Southwest, Mexico and other Latin American countries present.

Dr. Julius Klein, Assistant Secretary of Commerce, pointing out the extent of the South's foreign trade called attention to the evidence of Europe's ever growing fight to capture Latin-American markets as seen in the larger number of telephone cables and steamship lines connecting Europe with South America.

"In developing these markets we must fight off the American inferiority complex in trading—holding back because of different languages and currencies," he declared. "You are going to have to work for these markets and when you get them you are going to have to work to keep them."

Dr. William F. Gephart, vice-president in charge of the foreign trade department of the First National Bank, St. Louis, chairman of the foreign trade committee of the St. Louis Chamber of Commerce and president of the Bankers Association for Foreign Trade, spoke on the need of more knowledge of international trading. He said that in the Middle West and South more and better agencies are needed to conduct foreign trade; more complete and quicker sources of information on credit for buyer and seller must be arranged; exporters must be willing to grant more liberal terms to foreign buyers.

"The disposition of so many of our exporters is to insist on cash or very short term credit," he said. "This arises from the fact that they know so little about foreign trading and either do not have or cannot obtain adequate credit information on the prospective buyer."

He declared that Southern ports should have more adequate sailings for Latin American ports to take care of the growth of trade in the last fifteen years, which he said would expand phenomenally in the next quarter of a century.

Directors to serve for the coming year were elected as follows:

G. S. Hensley of New Orleans, vice-president of the Whitney Central National Bank; J. M. O. Monasterio of New Orleans, vice-president of the Hibernia Bank and Trust Company; Walter Parker of New Orleans, economist for Fenner & Beane; Carl Gies-

sow of New Orleans, executor general agent, board of commissioners of the port of New Orleans; W. C. Hasty of Little Rock of J. F. Hasty & Sons; R. R. McIntyre of Pine Bluff, of the McIntyre Company; Thad L. Hoffman of Kansas City, president of the Flour Mills of America; E. E. Black of Kansas City, president, Allied Manufacturing Export Company; John Taylor of Kansas City, president of John Taylor Battery Supply Company; R. W. Lightburne, Jr., of Kansas City, steamship agent; Edward E. Bartlett of Sapulpa, Okla., treasurer and general manager of Bartlett-Collins Company; Alf Mendoxa of Yukon, export manager of the Yukon Mill and Grain Company; Maj. W. B. Estes of Oklahoma City, general manager of the Oklahoma state chamber of commerce; Frank Buttram of Oklahoma City, president of Buttram Petroleum Corporation; J. Kirby McDonough of Dallas, vice-president and export manager of the Murray Company; Roy Miller of Corpus Christi, active vice-president of the Intracoastal Canal Association of Louisiana and Texas; F. W. Parker of Galveston, general manager of the Galveston Wharf Company; J. M. Lykes of Houston, president Lykes Brothers Steamship Company; Lloyd Stearman of Wichita, president Stearman Aircraft Company; J. R. Rabasa of Hutchinson, export manager William Kelly Milling Company; Glen B. Fretz of Wichita, export manager of the Red Star Milling Company; Warren E. Blaizer of Wichita, industrial commissioner, Wichita Chamber of Commerce.

New 10-Story Atlanta Building

Atlanta, Ga.—Plans are being made by the Orr estate, Paul Miller, representative, to replace the Doctors' Building at Peachtree and Pine streets, recently burned at an estimated loss of \$500,000, by a new 10-story fireproof building of reinforced concrete, steel, brick and tile construction, with stone trim and built-up roof. Pringle & Smith, Atlanta, are the architects.

\$1,600,000 College for Women

Washington, D. C.—Plans are being developed by the Eastern Atlantic Synods of the United Lutheran Church, Rev. Dr. J. Henry Harms, Philadelphia, Pa., president of the board of trustees, for the establishment of a college for women near Wheaton in Maryland, near the District of Columbia line. A founders committee, of which Carl M. Distler, Baltimore, is president, and E. Clarence Miller, Philadelphia, treasurer, is seeking to raise \$1,600,000 for the enterprise. Plans have been drawn for an administration hall with library and auditorium, dining hall, dormitories and gymnasium, of Georgian architecture. Col. P. M. Anderson, Washington, is the architect

and Miss Jessie Truman, Norwalk, Conn., is dean of the institution, to be known as Grace College.

\$10,000,000 KRAFT PAPER MILL

International Starts Work on 200-Ton Daily Unit at Panama City, Fla.

Major J. H. Friend, vice-president of the Southern Kraft Corporation, Mobile, Ala., a subsidiary of the International Paper Company, New York, wires the MANUFACTURERS RECORD as follows: "Southern Kraft Corporation plans immediate construction of 200-ton kraft mill at Panama City, Florida. Design and construction by their own engineering forces."

Work has already started on clearing a site of about 150 acres for the necessary buildings, it is said. The project will cost about \$10,000,000, according to estimates.

Mechanization Problems of Coal Mining Industry Convention Topic

With mechanization claiming the interest of coal mine operators and executives as a primary factor of progress, improvement and lower cost production; with the industry now thinking in machine terms, a new set of problems is confronting the coal world. Hinging on modernization in accord with new mining methods, expressed in terms of men-plus-machines, these problems are being faced with the knowledge that successful operation depends on their solution. At the forthcoming Seventh Annual Convention of Practical Coal Operating Officials to be held in Cincinnati, May 5-9 under auspices of the American Mining Congress, these problems will be major topics of consideration. Among mechanization problems to be stressed is personnel training, training the man to use the machine. This resolves into a problem of major importance, that of coordination between management, men and mechanical equipment. How the industry is meeting this phase of the problem is to be presented at the convention.

\$800,000 Dallas Building Projected

Dallas, Tex.—Plans are being prepared by Lang & Wittich, local architects, for a 10-story and basement public utilities building at Jackson and Harwood streets, estimated to cost \$800,000. The structure, to be erected by the Dallas Gas Company, will be of steel frame, granite base and brick exterior.

Investigating Opportunities in Georgia and Alabama for Manufacturing High-Grade Paper From Slash Pine

By FRANK C. GILREATH, Atlanta.

Use of Georgia slash pine in the manufacture of pulp and paper products by processes being developed and investigated by the Forest Products Laboratory at Madison, Wis., will be of tremendous advantage to Georgia and the South, according to Dr. Poole Maynard, industrial geologist of the Atlanta, Birmingham & Coast Railroad, who is now engaged in investigating the opportunities in Georgia and Alabama for the manufacture of paper.

Dr. Maynard visited the Forest Products Laboratory last December and worked in cooperation with U. S. Senator William J. Harris of Georgia, who is largely responsible for the government appropriation of \$25,000 for an investigation of slash pine to determine its suitability for use in the manufacture of pulp and paper products.

Revelation of the possibility of the use of slash pine in the manufacture of high-grade paper was first made a little more than a year ago by Dr. Charles H. Herty, a native Georgian, now an industrial consulting chemist with headquarters in New York. He declared at the convention of paper and pulp manufacturers that slash pine, up to fifteen or twenty years' growth, and provided it is not scarified, contains little more rosin than Canadian spruce and should be suitable for paper manufacture by the sulphite process.

Analyses were made by J. S. Kloss, manager of the Brunswick plant of the Hercules Powder Company, from representative slash pine gathered by Dr. Herty and by Alex Sessoms of Cogdell, Ga. Additional analyses of pulp and paper chemists have checked the accuracy of the original findings.

Summarizing what this means, Dr. Maynard says:

"I know of no work of greater importance to Georgia and the South than the research work on slash pine, which will be carried on by the Forest Products Laboratory in 1930 and 1931. It is difficult for us to realize the benefits that will accrue, not only to the South, but to the paper industry and the consumer as well.

"As Dr. Herty has said, 'Rural forest restoration in the South is going to result from the pioneer work of one man, Mr. Alex Sessoms, of Cogdell, Ga.' It was Mr. Sessoms again who cooperated with us, and all the wood was

collected and delivered for shipment at his expense.

"The remarkable thing about slash pine is:

"First—Its growth is greater by far than any other pine.

"Second—It develops little or no heart wood until it is 20 or more years of age.

"Third—It is the greatest producer of rosin and turpentine when scarified.

"Fourth—It has little more rosin than Canadian spruce when it is not scarified.

"Fifth—It grows 17 times faster than Canadian spruce and weighs 40 per cent more."

Dr. Maynard predicts that once it is established under commercial conditions that slash pine will make the highest grades of pulp and paper products, the manufacturers of news print and high grade papers will find it desirable from an economic standpoint to locate in Georgia and Alabama, not only on account of the low cost of raw materials, but on account of the fact that natural reforestation, under fire protection, will provide the mills with a perpetual supply.

Work Advances on Florida East Coast Canal

Jacksonville, Fla.—Outlining work authorized and contemplated in the near future on the East Coast Canal from the St. Johns River to Miami, which was recently acquired by local interests and transferred to the United States, the United States Engineer Office here, Lt. Col. L. V. Frazier, district engineer, states the Chief of Engineers has authorized maintenance work to restore the old canal to depth of 5 to 6 feet, to provide a channel pending the construction of the waterway to its full dimensions. Dredging has been authorized to full project dimensions, that is 8 feet deep at mean low water and a 75-foot bottom width of the Indian River section from St. Lucie Inlet north to the Haulover, where the channel is in open water and no right-of-way is required. Recommendation has been made to increase the bottom width to 100 feet, but this must be approved by Congress.

At present a hydraulic dredge is at work at St. Johns River moving south and a derrick boat is removing logs and snags near Oak landing between the St. Johns River and St. Augustine. A leased dredge is working near Palm Valley bridge and two additional leased dredges will be at work in a few days in the upper reaches of the Halifax

River. A leased derrick boat will remove snags and logs ahead of the dredges and bids have been invited for two hydraulic dredges to remove shoals between Jupiter and Lake Worth. Work will be extended as rapidly as possible to the section between Lake Worth and Biscayne Bay and surveys are in progress on the Indian River section to determine quantities for letting a contract. Field work is nearing completion on the section from St. Lucie Inlet to a point near Melbourne and bids will be invited as soon as quantities are computed and specifications completed.

Under the terms of the law transferring the project to the United States, local interests are to provide free of cost to the Government necessary right-of-way and spoil areas for the deposit of material excavated during the construction of the canal and its maintenance. Officials of the Florida Inland Navigation District are actively engaged in fulfilling these conditions.

Norfolk and Western Railway Officers

Roanoke, Va.—At a meeting here of the stockholders of the Norfolk and Western Railway Company the present directors were elected to serve for the ensuing year. Immediately following the stockholders' meeting the board of directors met for organization and elected the following officers to serve for the year: A. C. Needles, president; J. J. Jenks, vice-president in charge of operation; E. H. Alden, vice-president in charge of finances; B. W. Herrman, vice-president in charge of traffic; W. S. Battle, vice-president in charge of valuation, real estate and public relations; I. W. Booth, secretary and assistant treasurer; J. B. Lacy, treasurer; L. B. Cox and T. W. Hurt, assistant treasurers; T. W. Reath and F. M. Rivinus, general solicitors, and W. H. Wilson, comptroller.

Sale of \$3,500,000 Bonds

Houston, Tex.—Two Harris County bond issues aggregating \$3,500,000 have been sold to a syndicate comprising the Guaranty Company, the Bankers Company, Eldredge & Company and Hannahs, Ballin & Company, all of New York; the First Detroit Company, Detroit, Mich.; Ames, Emerich & Company, Inc., Chicago, Ill.; Estabrook & Company and the First National Old Colony Company, Boston, Mass.; the First Milwaukee Company, Milwaukee, Wis.; Carr, Moroney & Company and the Second National Bank, Houston. An issue of \$2,000,000 navigation district bonds was sold as 5s at 101.861 and an issue of \$1,500,000 road bonds was sold as 4½s at 101.17.

Miniatures of Southern Cities

UNDER this heading the MANUFACTURERS RECORD continues publication of the series of thumb-nail sketches of Southern cities, indicating in brief their resources and presenting some of their outstanding accomplishments in 1929.

Columbus, Georgia



Photo by Fourth Photo Section, Air Corps, Maxwell Field, Montgomery, Ala.

By J. RALSTON CARGILL, Columbus Chamber of Commerce.

LATEST estimate of the population of Columbus is 56,196. The city is known as a textile center, one of the local mills having 35 acres of floor space. Columbus is the home of Fort Benning, largest infantry school of arms in the world. The first ice machine was manufactured in Columbus, and the company is still making ice machines. Two local cotton gin plants ship gins all over the world.

Textiles lead the local manufactures; other industries named in order of importance are: Foundry and machine shops; brick and tile plants; textile machinery and farm implement factories; cotton gin plants; bottling plants, and food products manufactories. The 1927 value of local manufactured products was \$33,355,594. Payrolls in the city total over \$1,000,000 each month.

Columbus voted bonds in 1929 for paving all unpaved main streets, erecting more schoolhouses, building an annex to the City Hospital, constructing an airport and for more sewers.

Building permits for 1929 aggregated \$1,954,871.

Wheeling, West Virginia



By R. W. HOLCOMBE, Wheeling Chamber of Commerce.

WHILE Wheeling, a city of 75,881 population, is essentially a steel center, the manufacture of steel and steel products is rivalled by coal, oil, gas and glass production. The original cut steel nail, which gave Wheeling the name "Nail City" is still made, but it is now only one of the 5000

different kinds of products manufactured in this district.

Industries of this area require almost the entire alphabet for enumeration, ranging as they do from airplane manufacture to zinc smelting. Other products of these industries include: Tobacco, paper products, clothing, matches, laundry dryers, pipe, metalware, sanitary earthen ware, enameled kitchen utensils, stoves, ranges, electric conduit, glassware, steel castings, sprinkler systems, medicines, caskets, machine products, pressed steel parts, structural steel, signs, paints and chemicals.

A steel center could not be looked upon as a home of textiles, yet the production of calico and other cloth in Wheeling is extensive. A new silk factory is now under way.

Valuation of building permits issued during 1929 was \$1,890,443.

Wheeling is classed as a strictly American Plan Open Shop community.

Memphis, Tennessee



By C. M. ANDERSON, Memphis Chamber of Commerce.

PASSAGE of a special annexation act last year increased the area of Memphis to 34,246 acres, population of the city now being estimated at 256,000.

Twenty-two manufacturers of outstanding importance selected Memphis as a location during 1929. This number is almost half the list of industries acquired within the past two and a half years; products include automobile bodies, wooden toys, cement, preservative coatings for metals, meat, dairy, and other food products, cotton battings, shelled pecans, cosmetics, rayon yarns, fertilizer, barrels, breakfast foods, furniture, metal culverts, weed cutters, canned eggs, acetylene gas, flour, kerosene, asphalt, insecticides, veneer, wood mouldings, shellac, roofing, dimension lumber, chemicals, paving materials, hydraulic automobile lifts, oxygen, natural gas, gasoline, lubricating oils, Neon signs, polishes and paints.

Development of Memphis as a woodworking center and as a center for steel distribution was prominently featured throughout the year. Notable industrial construction projects included the new plant of the Murray Body Corp., which is to double its capacity soon.

Under direction of the Aviation Division of the Chamber of Commerce, dedication of the Municipal Airport was an outstanding aviation event of the year. Attention of the nation was focussed on facilities afforded by the new airport, and the value of the city as an aviation center was greatly enhanced.

A total of 53,354 people visited Memphis in attendance on 292 conventions.

Building permits for 1929 amounted to \$8,416,297.

Beaumont, Texas



By P. F. LAWSON, Beaumont Chamber of Commerce.

BEAUMONT, which in 1900 had a population of 9427, confidently expects to show by the 1930 census a figure above 70,000.

The largest rice package plant in the world is located in the city and is turning out 128,000 packages a day, with capacity demand booked ahead.

While production and refining of oil, and manufacture of petroleum products continue as the leading and fastest growing group industry of the Beaumont district, there is marked industrial expansion along other lines. The fabricating and drum making plant of the Petroleum Iron & Steel Co., bringing its raw material by barge from the Warrior River area, is becoming one of the most important industries of the South.

Agricultural development of the territory surrounding the city is surpassing that of many other parts of the state.

Completion of the Intracoastal Canal, expected within the coming year, will give Texas a connection at Beaumont with the great Mississippi inland waterway system.

For 1929, building permits in Beaumont totaled \$2,659,321, while the building assured for 1930 is already equal to that amount.

Brownwood, Texas



Fairchild Aerial Surveys, Inc., N. Y.

By CHARLES E. CUTTER, JR., Brownwood Chamber of Commerce.

BBROWNWOOD, with an estimated population of 19,000, is the center of the pecan industry of Texas and ships about 25 cars of shelled pecans yearly.

The significant city undertaking for 1929 was the voting of bonds for a \$2,500,000 water system. The program calls for damming a stream to the north of the city, forming a lake that will cover 10,000 acres. This project will give Brown-

wood a perpetual water supply and irrigate about 40,000 acres in the valley close to the city. Another project is the \$3,000,000 road program of Brown County; this is well under way and involves 100 miles of paved highways and 200 miles of hard-surfaced lateral roads.

Brownwood is engaged on a \$160,000 sewer program, including a new disposal plant. Excavations were started recently on the 12-story Hotel Brownwood to cost \$400,000.

Valuation of building permits for 1929 was \$1,209,190.

The city is considered an Open Shop community.

Chattanooga, Tennessee



By A. I. HAYS, Chamber of Commerce.

EFFECTIVE November 1, next, five suburbs will be annexed to Chattanooga, which will then have an estimated population of 130,000.

Chattanooga has the largest gas range factory, the largest electric steel foundry and the largest candy factory in the South; the only factory in the South making a full line of fire hydrants, valves and water works supplies; the only shovel manufacturing plant in the South, and the only factory in the world producing both the lumber and paper for fabricating wooden wirebound, corrugated fibre and folding boxes.

The city produces more oil well machinery than any other city in the United States, and also leads the country in manufacture of fireplace fixtures and bridle bits. Chattanooga produces more hosiery, boilers, and refrigerators than any other city in the South, ranking third for hosiery and second for boilers and refrigerators for the entire country. Chattanooga is the largest mercerizing center in the South; the leader of the South in manufacture of woolen goods; the principal Southern producer of clay and iron sewer pipe; produces more porcelain enameled steel, plows and cedar chests than any other city in the South, and is the fifth largest producer of commercial malleable castings in the United States. More sawmill machinery is produced here than throughout the rest of the South combined.

Chattanooga originates more goods for export than any other city in the South, with 100 firms engaged in export business.

The most significant undertaking for 1929 was the annexation program, which brought five suburbs into the city. These were entirely dependent on Chattanooga, but were not within the corporate limits.

Building permits for the city proper, exclusive of annexed territory, totaled \$2,520,970.

Manufacturers of Chattanooga operate strictly on the Open Shop plan. There is not an industry in the city operating entirely on the union plan.

Benefits of Manufactures Census

Value of Distribution Census to Manufacturers

Of the advantages which will accrue to manufacturers as a result of the current Biennial and Decennial Census of Manufactures, the first and foremost probably will be compilation of numerous preliminary reports, each of which will give figures for quantities and values of the several kinds or classes of products made within the particular industry. These preliminary statistics will show increase or decrease in output of each of the thousands of commodities, so that the individual manufacturer can easily determine whether he is getting his share of business—whether he is holding his own, or gaining, or losing, as compared with his industry in general.

In addition, preliminary reports will show the ratio between cost of materials and value of products, the output per wage earner, and ratio of wages to value of output, enabling the manufacturer to compare his own ratios with those for the industry as a whole.

But if these preliminary reports are to be of maximum value, manufacturers must cooperate with the Bureau of the Census by making returns promptly and by taking care to answer correctly and completely all questions that apply to their operations. It is planned to compile preliminary reports of this census from returns as received, with little or no editing or verification of doubtful items, except in the earliest returns. Final reports, however, will not be prepared until defective returns have been corrected and verified in the usual manner.

In the final reports will be presented detailed statistics showing, among other things, the cost of productive and of non-productive labor, increase in the employment of women in industry in recent years, number of hours of labor per week for individual wage earners; migration of industries from state to state; quantities and cost of principal materials and of fuel consumed; and the power-plant equipment.

The inquiry in regard to sales made during the year has been substituted in this census for the former inquiry calling for data on production during the year. Correct statistics on production are preferable to statistics on sales, but the Bureau realizes that many manufacturers have actually been reporting their sales and not their production, and it was decided, therefore, to ask for what can be obtained from all manufacturers, rather than for what only a part of the manufacturers could and would report. In a few cases, the former inquiry calling for data on production has been

retained at the specific request of the industries concerned.

Value of Distribution Census to Manufacturers

Manufacturers probably will derive nearly as much benefit from the Census of Distribution as will accrue to either wholesale or retail dealers. In response to demand of the business world generally, Congress authorized the Census of Distribution to be taken as a part of the Fifteenth Decennial Census. Figures regarding the size of each establishment engaged in distribution, the activities of chain stores, the prevalence of cash as against credit operations, and other data needed by manufacturers in laying out sales quotas and sales campaigns, will be made available.

Every retail store, little or big, no matter where located, in downtown districts, outlying sections, towns, villages, and country cross roads; also wholesalers, jobbers and commission merchants are being canvassed in the census. Others included are construction contractors doing \$25,000 worth of business; hotels having 25 rooms or more; automobile repair shops, restaurants, butchers and abattoirs, country buyers of farm products, co-operative buying and selling organizations, brokers, supply houses, and equipment dealers.

Inquiries of the distribution questionnaires are designed to reveal information concerning geographical distribution of the various types of retail and wholesale outlets, the kind of merchandise handled and by what stores, in the various sections of the country. A question also will be asked of all manufacturers, which will reveal the extent to which they are engaged in wholesale and retail merchandising activities, and will show the extent to which their products are sold through the assistance of agents. When the census is completed accurate and complete information should be available showing the manner in which manufacturers of each of the 340 different kinds of industries in the country are selling their products. All this information will be available geographically as well as industrially and by size of establishment.

\$750,000 Hotel for New Bern

New Bern, N. C.—General contract to erect a \$750,000 hotel here for the North Carolina Hotel Company, of which H. A. Underwood, architect and engineer of Raleigh is president, has been awarded to W. P. Rose and Company of Goldsboro, N. C. The building will be of con-

crete and steel, with walls of brown rough texture brick, and will contain 196 guest rooms, dining room 45 by 115 feet, spacious lobby and other features. It will be located on Union Point at the junction of the Neuse and Trent rivers, the site to be dyked to the harbor line and filled in to cover 6½ acres. Two slips will be built for the harborage and anchorage of yachts and small boats and a concrete seat will extend along the hotel exterior for the entire waterfront. A hundred feet away there will be a modern seawall with artistic railing and between the seawall and hotel promenades, grass plots and flower beds will be provided. Plans for the building were prepared by Mr. Underwood and Raymond R. Eagle, New Bern, is the supervising engineer.

HOUSTON OIL REVAMPS CAPITAL STRUCTURE

\$25,000,000 Bond Issue Planned

Houston, Tex.—Directors of the Houston Oil Company of Texas plan to revamp the capital structure of the corporation by retiring an issue of \$7,000,000 outstanding 10-year 5½ per cent sinking fund convertible notes, declaring a 10 per cent stock dividend, splitting both the common and preferred shares on the basis of four new shares of \$25 par for each \$100 par share now outstanding, and the immediate issuance of \$12,000,000 new 10-year bonds without conversion features. These bonds have been underwritten by Mackubin, Goodrich & Company, Baltimore, and Whitaker & Company, St. Louis, and in addition to providing for the retirement of the \$7,000,000 outstanding convertible notes as indicated, funds will also be provided for increasing the natural gas pipe line facilities of the Houston Pipe Line Company, a subsidiary, and developing oil resources in the territory in which the company operates. Although only \$12,000,000 bonds have been underwritten, the new indenture provided for a total issuance of \$25,000,000 bonds to take care of future expansion and development needs.

\$1,500,000 Building Contracted

Washington, D. C.—General contract to erect the \$1,500,000 office building here for the Potomac Electric Power Company has been awarded to the George Hyman Construction Company, Washington. The building will be nine stories and basement, surmounted by a pent house; 193 by 87 feet, of brick and limestone construction with a white granite main entrance on Tenth street. Waddy B. Wood, Washington, is the architect.

LETTERS FROM OUR READERS

Former Governor Lowden Strongly Discusses the Farm Situation

Frank O. Lowden,
Sinnissippi Farm,
Oregon, Illinois.

Chandler, Arizona.

Editor Manufacturers Record:

Your letter with enclosures was forwarded to me here, where I have been for the last few weeks.

I have read with exceeding interest your correspondence with Mr. Hugh MacRae, as printed in the *MANUFACTURERS RECORD* of February 27. I have also gone over with care the hearings in the House of Representatives upon the Simmons-Whittington Bill.

This bill would authorize the creation of organized rural communities to demonstrate the benefits of planned settlement and supervised rural development. While the hearings were devoted largely to the Southern agricultural situation, only in a lesser degree perhaps would the logic of the evidence given apply to the agricultural portions of the country as a whole.

There are compelling reasons in my opinion for carefully planned and supervised organized rural communities. It is agreed upon every hand, I think, that farmers must organize if they would keep pace with the age in which we live. Experience not only in our own country, but throughout the agricultural world, has shown that organization of agriculture, to be effective, must be from the bottom. The community, therefore, must be the basis of successful cooperation among farmers. Experience has also shown that cooperation among farmers is effective only when the farmers of the community are largely composed of farm owners. Of course, farm tenants of the higher class may also successfully cooperate, but never I think tenants of the cropper class. In order, therefore, to give the cooperative movement a fair chance of success in most of the Southern states and in some parts of the North and West, we must substitute a community of farm owners upon a fairly large scale for the cropper system now in vogue. Whatever may be the disposition of the banker to encourage better practices in agriculture, he finds many obstacles to overcome. His customers are scattered. He must deal with them individually, and the old system on the whole remains.

We are living in an age of mechanical power. Farmers are often criticized for not employing that form of power more. If the farmer operates a family size farm, and that is the ideal size farm for any country, he cannot afford to employ power fully. If the community, however, of which he is a part, is large enough, it can cooperatively avail itself of all the mechanical power needed to farm economically. Again, though the banker may fully appreciate the advantages of mechanical power, he can do little to encourage this with his individual and independent customers. It would seem, as many think, that ultimately we shall have corporation farm-

ing on a large scale, with the elimination of the yeoman type of farmer, unless we develop a far larger measure of cooperative farming than we have ever employed in the past. There can be no difference of opinion, I think, but that the latter is infinitely preferable from the standpoint of the country as a whole.

Go where you will, whenever you find a community of land owners closely knit, cooperating closely in the purchase of their supplies and in the marketing of their products and in their larger farm operations which require the use of expensive machinery, there you will find agriculture at its best estate. I believe the government can well afford, in cooperation with local interests, to set up the organized rural communities provided for in the Simmons-Whittington Bill. While the need, I think, is greater in the South than in the North, owing to the greater prevalence of the cropper system in the former, I believe that the idea should be gradually extended into other sections of the country. Nor, notwithstanding my great respect for your judgment, do I believe that such action on the part of the government would be resented by the millions of farmers who had no part in these special enterprises. Either these organized communities would succeed or fail. If the former, they would powerfully strengthen the progressive farmers throughout the land in their efforts to organize agriculture, which must go on whatever we do. If the experiment should fail, it would serve notice upon the country that something far more fundamental than lack of credit or inefficient farming was at the bottom of the wide distress which has been prevalent in our farming regions for many years. We could then hope that the whole country would be awakened to the imperative need of attacking the farm problem in deadly earnest. No one, I think, whether manufacturer, or merchant, or banker, or professional man, can contemplate the continuous decay of our agriculture without fear for the future of our country.

FRANK O. LOWDEN.

Florida Reduces Its State Government Expenditures

Editor Manufacturers Record:

Tallahassee, Fla.

The first year of the new administration for Florida can best be summed up in the following statement:

The cost of government has been reduced \$1,250,000, expenditures reduced \$5,500,000 and a plan is under way for tax equalization and reduction.

The first achievement was accomplished through a reduction in payroll of \$722,000. Expenditures show a certain retrenchment, although attention has been paid to the necessity of maintaining the state's assets. More than \$2,000,000 will be spent soon for aid to schools and retirement of county bonds. Other than payroll reduction, \$499,000 has been cut from the cost of maintaining state highways; the state maintained in 1929 nearly a thousand miles

more than in 1928, yet maintenance cost was cut from over \$500 a mile to approximately \$250.

Tax revision and reduction, the second step, is being undertaken by a committee formed in Jacksonville at the call of Governor Carlton. This committee is composed of business leaders in the state and the program is to study the needs of Florida and propose their plan for tax equalization at the next session of the legislature.

JACK LACEY.

Present Legislative Trend Declared to Lead Toward Socialism

Little Rock, Ark.

Editor Manufacturers Record:

The suggestions herein are based on a survey of political history of the United States covering a quarter of a century. The thoughts are submitted without prejudice, but with a patriotic motive to strengthen representative government.

Has primary election as applied to state and federal officials raised the standards of public servants and public service?

Should primary elections extend beyond county and municipal selection of public servants?

Socialism looms conspicuously in present political conditions, both state and national. Bureaucracy is already here. The action of the United States Senate vs. the lobby is cited as evidence of a legislative branch of representative government going far beyond its legitimate jurisdiction.

The press of the nation should be thoroughly interested. Its power is practically unlimited, and it has the intelligence and equipment necessary to solve the problem of the form of government under which to live happily without destroying private initiative and individual control of business affairs. A careful study of present legislative trend will perhaps convince any student that we have drifted a long way from the course charted by the founders of the confederation of the United States of America.

Senators primarily do not represent the masses, commonly designated as the people. The Senate as a body was not created for the purpose of legislation further than to confirm appointments made by the chief executive, ratify treaties and to adjust differences arising between the states, yet under present legislative practice the United States Senate has arrogated to itself supreme power of legislation and to a certain extent overshadows the executive and overawes the judiciary in that nearly every lawyer in the Senate has a partner staked out in his home state, where in important cases he appears before the courts. This practice applies with equal force to Representatives.

Is the practice ethical? Will the press of the country go into this matter in the interest of the public? An unbiased investigation and report should prove interesting and uplifting.

S. Q. SEVIER.

IRON, STEEL AND METAL MARKET

No Significant Change in Steel Situation

Pittsburgh, April 21—[Special.]—A great deal of mental energy is being spent trying to diagnose the present trend and the prospect both of trade in general and of the steel industry in particular, and at a glance it appears that there are divergent views, but the fact is that too close appraisals are being attempted. There is on the whole very little change. Efforts to discern trends cover up what is really the most important feature of business, its steadiness.

A month ago many steel producers if not all thought the steel business was on the down grade and would continue so, although they did not air their views. Instead, business on the whole has grown a trifle better. What confused the prospect was the lightness of mill backlogs when usually in March they are heavy. Consumers have their requirements just the same, they are merely more conservative in covering, waiting until the last moment. March is commonly the peak month in steel production, but this year March was under the February rate, although only by 2.7 per cent. Normally, then, April would be under March but the chances are strong that this month will instead show a gain over the March rate.

In trade generally there is seasonal improvement, but outside of seasonal improvement, or allowing for seasonal fluctuation, there is a slight improvement, not as much as was hoped for but still something.

Since the first of the year up to date steel has done somewhat better than would be expected from the state of general trade and the light operation of the automobile industry, but there is no visible reason why this relationship should not continue after allowance is made for normal seasonal variation in steel, which means relative dullness in summer time. Somewhat the present rate of steel demand and production should continue well into June.

Steel ingot production is at nearer 80 per cent than 75 per cent of present capacity. There has been a barely discernible increase in three or four weeks past, just enough to show conclusively that there is no downward trend.

There has been a further increase in demand for standard or merchant pipe, seasonal in character but coming later than usual. There is a little increase in demand for oil country tubular goods for well drilling and maintenance. Also there have been various relatively small orders for natural gas and oil line pipe,

all for very quick shipment so that there is no backlog on mill books, but further and extensive line pipe buying is expected.

Automobile production continues to pick up, although slowly, and everywhere it is noted that Ford and Chevrolet are doing much better than the field, while Ford is doing noticeably better than Chevrolet. As both are light cars, requiring barely more than two-thirds as much steel as the average of all other cars, the steel consumed does not make as good a showing as do the statistics of number of cars produced.

Fabricated structural steel lettings reported last week were light, 29,000 tons. The total since January 1 is 25 to 30 per cent under similar totals last year and year before. The large structural shops are well filled with business while the small shops have been getting a better division than formerly of the orders placed.

Finished steel prices are somewhat irregular in several lines, and bars, shapes and plates are somewhat easier than two or three weeks ago although not quotably lower. In other lines strong efforts are being made to hold if not to stiffen prices. In nails there has been price cutting in Chicago and St. Louis territory, also along the seaboard on imported nails.

Copper Declines Four Cents a Pound—Export Sales Show Increase

New York, April 21—[Special.]—The important news of the metal markets and in fact throughout the business world last week was the reduction by 4 cents per pound in the price of copper to 14c, delivered at home, and to 14.30c c. l. f. European ports, the first price change in a year, lacking a day. But the news was evidently regarded as constructive, as evidenced by the firming of copper shares on the New York Stock Exchange following the reduction.

The mark down came soon after publication of March copper statistics, showing that surplus stocks of refined copper had gained nearly 23,000 tons to a total of 256,000 tons, the largest reserve since January, 1922, and revealing a gain of both blister and refined stocks of over 25,000 tons to the total of 522,000 tons.

At the first of this month it was being stated that the middle of the 30-day period would be critical for the copper producers, not only because statistics for March would prove to be unfavorable, but also because it was the end of the first "stabilization year," which time

might be appropriate for a revision in prices. Predictions proved true in every respect.

Reasons for the price decline are pretty well known. Surplus stocks increased five times in a year; buyers have been on a strike since September; consumption was much less than last year; virtually all other basic commodities have declined sharply in price; substitutes for copper were being used; abnormally large quantities of copper scrap were being used in place of virgin metal.

More immediate reasons for the decline are said to have been as follows: Until recently the larger producers had been allowing smaller producers to sell more than their normal ratios, for the reason that big producers had better outlets for refined copper in their fabricating subsidiaries. Moreover, the three custom smelters had to keep a steady flow of shipments leaving plants, from the nature of their business which is purely a smelting and refining operation on a toll basis, they not owning ore. More recently, however, large producers refused to "hold the bag" any longer for the smaller producers and insisted on their share of sales. The smaller companies became restless and began to sell under the established price. This forced the general reduction.

Following the price reduction, export sales were the largest since September, averaging 6000 tons daily, with England buying the largest quantities at the start. Foreign consumers were first to purchase on an extensive scale, largely because they are farthest from points of production and more time must elapse during shipments. However, domestic consumers were showing more interest. One reason for delay in domestic revival of business was the length of time taken by brass and copper goods manufacturers to readjust prices of their own products, or on copper wire, tubing, sheets, bars, etc.

There are some who expect a further decline in refined copper to 12 cents per pound, though probably the majority opinion is that the drastic cut in price will guarantee present levels for two months at least. Much contemplated expansion on the part of public utility companies is said to have been held up by the expectancy of a price decline in copper. This expansion should now go forward.

The price situation generally among the metals has been one of easiness. Zinc prices have been slipping at the rate of 50c per ton per day, levels being back to the 4.80c price of three weeks ago, which in turn was the bottom level

of the past eight years. Tin prices have been sagging gradually also because of increasing supplies of spot stocks in warehouses of the United Kingdom and at New York. Collapse of the stabilized price of copper has hurt, sentimentally at least, the efforts made by the British to stabilize tin quotations. Lead continues the most healthy metal, with prices very firm and likely to rise here since prices at New York are $\frac{3}{8}$ c per pound under the London price equivalent.

Principal gain in metal consumption lies in the automobile industry, with operations higher by a fair margin than a month ago. At the meeting of the American Zinc Institute at St. Louis the past week the need for a bureau to discover new uses for zinc and promote the welfare of the industry was emphasized.

Among the minor and precious metals platinum stands out for weakness, having been marked down another \$2 per ounce to \$45 for the pure refined grade. Silver prices are steady. Quicksilver is fairly steady but quiet. Antimony is quiet and somewhat easy in tone.

A slight gain in the operating rate of the steel industry gives some measure of cheer. Moreover, surplus stocks of crude steel at the mills have been reduced to virtually nothing, so that production and consumption are now well balanced.

Pig Iron Sales Continue Active

Birmingham, Ala., April 21—[Special.]—Selling and delivery of pig iron in this section continues at a greater aggregate than the production. The world has been advised that Southern iron means Birmingham iron and the product right now is being used in a wider territory than for years; in the East, on the Atlantic coast well up into the New England states, in the middle-West, in the St. Louis and Chicago sections, throughout the South and Southwest and elsewhere. Sales for shipment to the East are of consequence and large tonnage is moving. The melt in the home territory is steady and will continue so through the summer. Cast iron pressure pipe shops are still the more active consumers of iron, with order books well covered and warrant for steady production. Shops are operating on a five-day schedule, three shifts to the day. Furnace interests are urging melters to specify deliveries against a longer period of need, to increase reduction of surplus stock and clean the books for the future.

Smaller consumers, including stove foundries, are buying iron in small lots, providing for a few weeks ahead.

Russell Hunt, secretary-treasurer of the Sloss-Sheffield Steel & Iron Com-

pany, also sales manager for the company, on a tour of New England recently spoke before the New England foundrymen's association and showed the melters of down-East that Southern pig iron is an excellent mixture for Northern irons and also advocated the taking of iron and steel scrap, encouraging friends in that section toward the Southern irons.

Foundries and machine shops of the Birmingham district are showing more activity as contracts of various kinds come in. Negotiations are under way for taking over one of the large machine shops and foundries by a mid-West concern, the property to be improved and developed.

Steel ingot production and steel finishing mill operations are unchanged, the first on 90 per cent capacity and the latter 75 to 80 per cent. There is a good demand for plate, a fair demand for sheet, and structural steel demand is steady. Fabricating shops have many orders on hand; in the main they are under 100 tons each. Highway bridges in Tennessee, Alabama, Mississippi and other states are taking considerable structural steel.

Ingalls Iron Works Co., in the purchase of the Bollinger-Andrews Construction Company and the Pennsylvania Fabricating Co., at Verona, Pa. (Pittsburgh), provides manufacturing facilities to supply not only the Southeast but a considerable portion of the country east of the Mississippi river, while the shops in Birmingham will care for the work in the South, Southwest and west of the Mississippi. The Birmingham Tank Works is an Ingalls interest; this shop right now is very active, producing septic and gasoline or oil storage tanks, much plate being used.

Pig iron and iron and steel scrap quotations are as follows:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$14.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$14.50; iron of 2.75 to 3.25 per cent silicon, \$15.00; iron of 3.25 to 3.75 per cent silicon, \$15.50.

OLD MATERIAL.

Old steel axles	\$14.00 to \$15.00
Old iron axles	14.00 to 15.00
Old steel rails	11.00 to 12.00
Heavy melting steel	10.50 to 13.00
No. 1 cast	10.00 to 11.00
Stove plate	10.00 to 11.00
No. 1 railroad wrought	10.00 to 11.00
Old car wheels	10.00 to 11.00
Old tramcar wheels	11.00 to 12.00
Machine shop turnings	7.00 to 8.00
Cast-iron borings	7.00 to 8.00
Cast-iron borings (chem.) ..	12.00 to 13.00

Firestone Builds One-Stop Service Station

A one-stop service station was recently completed by the Firestone Service Stores, Inc., in Atlanta. The building is of reinforced concrete, faced with brick, provided with steel and bronze marquette, a ramp extending to each story and to the roof. The building is designed and so constructed as to permit construction of additional stories.

On the main floor are battery repairing, recharging and sales departments; brake testing, adjusting and relining departments; oiling and greasing; headlight testing; display room; acces-

sories stock room and a complete filling station. On the mezzanine floor are the tire and tube repair departments, and the general offices and sales rooms. Washing and polishing is done on the second floor. The building is provided with electric passenger and freight elevators, and a dumbwaiter for delivering repair work to various departments and returning it to the service floors. Stock room and hydraulic press for tires are located in the basement. The structure has a storage capacity of 300 cars and trucks. General contractor for the building was J. S. McCauley & Co., Atlanta.



A Master Service Station in Atlanta for the Firestone Service Stores, Inc.

AVIATION, AIRPORTS AND AIRWAYS

Splendid Facilities Provided at Abilene's Municipal Airport



Hangar at New \$150,000 Air Terminal, Abilene, Texas.

The recently completed hangar at the municipal airport of Abilene, Tex., is capable of housing 14 planes, and is equipped with a heating and cooling system. It measures 80 by 100 feet, and is fitted with rolling steel doors to insure quick and easy removal of ships. It has a clearance of 80 feet and is of steel construction with curtain brick walls, covered with stucco. A large lean-to houses the heating plant, offices, wash and locker rooms, shops and transformer room.

The terminal administration building is the show spot of the Abilene air harbor. On the first floor are rest rooms, ticket office, spacious waiting room and manager's office. On the second floor is the field manager's apartment, up to date in all respects.

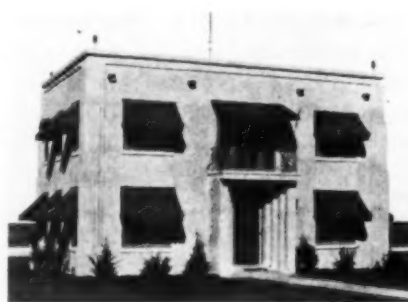
Facilities were built by B. Russell Shaw Co., St. Louis, Mo., under the su-

pervision of H. B. Sudekum, chief engineer.

Within convenient distance of the city, only three miles away, the field is high, gently rolling and well drained. Runways have been treated with oil and asphalt base, providing all-weather landing and takeoffs. Landing strips with

approaches are kept open and marked to control traffic. The night lighting system includes green approach lights at the end of landing strips, white boundary lights, and a 10-million candle-power revolving beacon on the tower surmounting the hangar. The beacon can be seen on clear nights for a distance of 50 to 75 miles. Large letters spelling Abilene Airport, and printed on top of the hangar can be seen from a great distance. Three huge floodlights spread a fan of light over a large landing area; one only will furnish adequate light for safe landing. Sides of the hangars are floodlighted and poles and danger points marked with red obstruction lights.

The port will be dedicated May 31, the closing day of the West Texas Chamber of Commerce convention in Abilene.



Terminal Administration Building.

\$1,326,000 Contract on Government Flying School

Schertz, Tex.—General contract has been awarded by Captain A. W. Parker, Constructing Quartermaster at Randolph Field, to Kenneth L. Colborn, Inc., Pasadena, Cal., at \$1,328,801, to erect 42 company officers' quarters and 65 duplex (130 sets) buildings for non-commissioned officers' quarters. The former will be one story, 56 by 53 feet, and the latter, two stories, 57 by 37 feet, both to be of Mission architecture, masonry and stucco construction, with tile roofs. A contract was recently awarded to William Balzen, San Antonio, to erect 10 field officers' quarters, at \$141,760. Bids

are expected to be opened about May 7 for a sewage disposal plant to cost from \$50,000 to \$60,000.

New Night Air Mail Service

Murfreesboro, Tenn.—A new night air mail service, linking the northern and southern sections of the United States by way of the central West, was inaugurated April 1 by Interstate Airlines, Inc., a division of the American Airways, Inc., operating company of the Aviation Corporation, New York. The proposed routes will extend between Chicago and Atlanta and Evansville and St. Louis.

New Passenger Air Lines Projected

Atlanta, Ga.—According to C. H. Dolan, assistant operations manager, the 1930 program of the Eastern Air Transport includes inauguration of the first links in a chain of passenger air transport services in multi-motored planes over the Atlanta-New York, Atlanta-Dallas and Atlanta-Miami lines. Three tri-motored, all-metal Fords have been purchased and the E. A. T. depot at Candler Field already provides passenger waiting rooms and other facilities, while the hangar proper will house five tri-motored planes.

NEW AND IMPROVED EQUIPMENT

Shut-Off Valve and Coupling

A shut-off valve and coupling, recently announced by C. B. Hunt & Son, Salem, Ohio, is said to present a new application of the by-pass principle. To turn the flow of air on or off, the only movement required is a quarter-inch push or pull, and in combination with Quick-As-Wink couplings this valve permits air to be shut off anywhere on the hose line, auto-



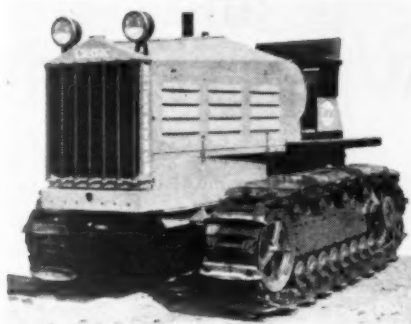
Quick
As-Wink
Valve
Coupling

matically bleeding air for removal of tools for repairs or oiling. In spite of the free swiveling of coupling and valve, it is claimed that the shut-off valve and coupling are air tight from one ounce to 1000 pounds pressure. They are made in sizes from 1/8-inch to 4 inches to fit all common types of pipe connections.

Cletrac Line Extended

A Cletrac unit, the 80-60, has been announced by the Cleveland Tractor Co., Cleveland, Ohio. This new model in the advanced power range, with a maximum eighty and rated sixty horsepower at the drawbar, is adapted to a wide range of utility. The total weight is 20,250 pounds; overall length, 156 inches; overall width over the tracks, 96 inches, and overall height from the ground to the top of the radiator, 82 inches. The tread of the tracks is 67 inches from center to center and the width 17 inches.

The unit is powered by a 6-cylinder motor, 5 1/2-inch bore by 6 1/2-inch stroke, governed at 1050 r.p.m., and having a 119 brake horsepower. It has a four-bearing crankshaft, 3 1/4 inches in diameter by 3 1/4 inches long, force feed lubrication, pistons of 5 ring construction and radiator of tube and fin construction. The clutch is of the Borg and Beck, 18-inch pull type, and in the rear of the transmission case is a pump for pumping oil



Tractor Unit of Many Uses

from the final drive gear housing, discharging it through a filter and back into the transmission and differential compartment. The rear of the lower transmission shaft is sealed to hold the oil in this compartment to its proper level.

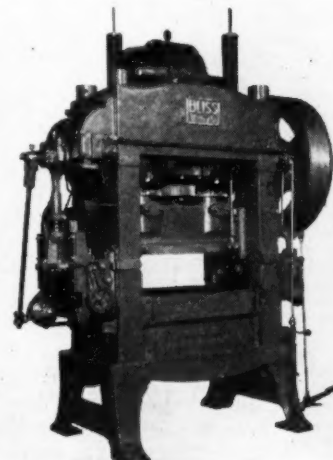
From the differential, the final drive is through a three-gear planetary gear set mounted in Timken single and double-row ball bearings. Two types of steering are used, one similar to that on the older models, with exception of a three-shoe brake band, while another type of three-shoe band is interposed between the differential and final drive on the main drive shaft brake drum. Other features of the unit of advanced design and construction include the compensating planetary differential, rear wheel shafts, track frame shaft, lower track wheel frame, front wheel, front spring construction, lower track wheel bearings and oiling system and the track drive.

Four Cylinder Engine for Ohio River Tug

A gas tug boat recently completed and put into service by the Ohio River Dredging Co., Huntington, W. Va., is powered by a Hercules TXO 6 3/8-inch by 7-inch four cylinder engine. In addition to this being what is thought to be the only tug boat on the Ohio River using a multiple-cylinder engine instead of the usual single cylinder type the new craft is unique in other respects. Its power hook-up is accomplished by means of a special arrangement of Tex-rope and belts. E. V. Rawn, president of the Ohio River Dredging Co., says the tug is very economical, using from seven to eight gallons of gasoline an hour at an engine speed of 800 r. p. m. and a wheel speed of 29 r. p. m. The engine develops about 90 horsepower. The tug boat is 61 feet long and 12 feet wide, with a draft of 2 1/2 feet. The craft has a still water speed of 10 miles an hour and makes about 4 1/4 miles an hour pushing two barges of total gross displacement of 850 tons.

High Production Press

A new 125-ton double eccentric high production press has been added to the line of machinery manufactured by the E. W. Bliss Company, Brooklyn, N. Y., manufacturers of pressed metal machinery, automatic can machinery, dies and special equipment. This high speed unit, designated as No. 675, is designed with ample room for long follow dies, having a bolster area of 27 inches front to back by 35 inches right to left, handling dies up to 8 inches shut height. To maintain rigidity at high operating speeds, the double eccentric shafts are supported right up to the one-piece ball joint connections, so that bending stresses in the shafts are eliminated, and there can be no deflection in the shafts. The high speed double roller grip feed is said to be extremely accurate and serviceable, and when furnished for feeding strip stock, the machine is equipped with a mechanical starting gauge, operated by a treadle, leaving the operator free to guide the strips with his hands. Other features include a shear type strip cutter, rolling key clutch, flexible motor



An Addition to the Bliss Line

drive and complete and easy adjustments, making the press an efficient unit of production for laminations, auto hardware and other work.

\$1,500,000 Hotel Addition

White Sulphur Springs, W. Va.—General contract to erect a \$1,500,000 addition to the Greenbrier Hotel here for White Sulphur Springs, Inc., has been awarded to the John W. Cowper Company, Inc., Buffalo, N. Y., and Richmond, Va. The addition will be of reinforced concrete, tile and stucco and will contain 350 rooms. It is expected to be ready for occupancy by the spring of 1931. Philip L. Small, Inc., Cleveland, Ohio, is the architect.

CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ala., Florence—City and Lauderdale County consummated negotiations for leasing 105-acre airport site, known as Delaney tract; Chamber of Commerce plans improvements, including hangar and other facilities.

Ark., Rogers—Mid-Continent Air Express, Hutchinson, Kans., leased 30 acres on Hwy. 71; establish airport and aviation school.

Fla., Fort Pierce—Fort Pierce Airways, Inc., chartered; Frank M. Upton, Edwin Binney.

Fla., Miami—Miami Marine Airport, Inc., chartered, J. E. Yonge, Exchange Bldg.

Miss., Aberdeen—Bd. of Directors, Aberdeen Chamber of Commerce, M. M. Mims, Secy., plans constructing airport, including hangars, repair shop and other field units; \$50,000 with equipment.

Tenn., Newport—Bettis Aero Corp., capital \$20,000, incorporated; Charles C. McNabb, J. E. Bettis.

Tex., Ballinger—City Comsn. leased 40-acre tract for airport; ultimately erect hangars.

Tex., Fort Worth—City, O. E. Carr, City Mgr., let contract to Quisile & Andrews, 2212 W. Seventh St., at about \$7556 for hangar unit, Meacham Field; 160x78 ft., stucco, steel, rein. conc., electrically operated doors; private plans. 4-17

Tex., Houston—Div. of Supplies, Association of Commerce, E. W. Libby, Ch. Clk., Washington, D. C., has low bid from Harrison-Wright Co., 4 W. Third St., Charlotte, N. C., at \$23,427 for constructing Kingsville-Houston Section of Brownsville-Houston Airway. 3-27

Tex., Lubbock—N. L. Peters, Archt., of Peters, Strange & Bradshaw, drawing plans for airport; 640 acres purchased. 4-17

Va., Hopewell—City let contract to Karlstrommer Construction Co. for hangar; steel on ground.

Bridges, Culverts and Viaducts

Proposed Construction

Ark., Harrison—State Highway Dept., Little Rock, has tentative plans for 400-ft. rein. conc. Crooked Creek Bridge on Vine St., Highway No. 65; 30-ft. roadway, two 5-ft. sidewalks; probably let contract in May; C. S. Christian, State Highway Engr.

Ga., Augusta—Richmond County Commrs. received low bid from National Engineering & Construction Co., Masonic Bldg., Augusta, at \$11,850, for temporary crossing over Savannah River at Sand Bar Ferry, near Augusta. 4-10

Ga., Augusta—Congress passed bill authorizing States of Georgia and South Carolina, jointly, to construct and operate free highway bridge across Savannah River at or near Fifth St., Augusta; W. R. Neel, State Highway Engr., of Georgia Highway Bd., Atlanta; C. E. Jones, Chmn., South Carolina State Highway Comsn., Columbia. 3-6

Louisiana—Great Southern Lumber Co., Bogalusa, has authority in bill signed by President Hoover, to construct railroad bridge across Bogue Chitto River in Washington Parish.

Louisiana—Louisiana Highway Comsn., N.

E. Lant, Bridge Engr., Baton Rouge, advises no new recent developments regarding plans for bridges over Bonnet Carre Spillway; no agreement reached on financing structures, and no construction plans made by War Dept. or State Highway Comsn. 3-13

Louisiana—Louisiana Highway Comsn., Baton Rouge, has cancelled request for informal bids for financing, design, construction and operation of 8 toll bridges at following locations: Morgan City and Melville, over Atchafalaya River; Couchatta and Moncla, over Red River; Jonesville, over Black River; Harrisonburg, Monroe and Sterlington, over Ouachita River; Harry B. Henderlite, State Highway Engr. 3-20

La., Houma—War Dept., Washington, approved plans of Morgan's Louisiana and Texas R. R. and Steamship Co. of New Orleans, La. (signed also by Texas & New Orleans R. R. Co.), for bridge across U. S. Canal, connecting Bayou Black and Terrebonne (Louisiana and Texas Intracoastal Waterway), near Houma, La.; proposed bridge will be part of railroad extension; horizontal clearance to be greater than that specified for enlarged waterway.

La., New Orleans—Maj. R. F. Fowler, U. S. Dist. Engr., hold hearing May 9 to reconsider plans of Public Belt R. R. Comsn., New Orleans, for bridge over Mississippi River about 2 mi. upstream from New Orleans; plans provide vertical clearance of 112 ft. above average high water; no change in location of bridge contemplated.

La., New Orleans—Senate passed House Bill extending time, for one year, to George A. Hero, and Allen S. Hackett, Const. Engr., 511 Whitney Bldg., for beginning construction of bridge across Mississippi River, New Orleans. 2-27

Md., Baltimore—Charles F. Goob, Ch. Engr., completing plans for Twenty-ninth St. Bridge, part of Stony Run Highway, extending from point on Mount Royal Dr. south of Druid Lake, across Jones' Falls Valley to junction with Sisson St.; stone and conc.; estimated cost \$600,000; will advertise for bids in about 2 months.

Md., Oakland—State Roads Comsn., Baltimore, receives bids April 29 for conc. bridge floor, approaches, etc., for bridge over tracks of Baltimore & Ohio R. R. Co., on road from Deer Park to Kitzmiller, at Wilson; L. H. Stewart, Sec.

Miss., Charleston—Tallahatchie County Bd. of Supvrs., Mrs. S. D. Henderson, Clk., receives bids May 5 for 3-span bridge across Sandy Creek in Beat 1.

Miss., Meadville—Franklin County Bd. of Supvrs., A. R. Moore, Clk., receives bids May 5 for 50-ft. standard steel I-beam span over Wells Creek, near Knoxville.

Miss., Meridian—Lauderdale County Bd. of Supvrs., J. B. Holand, Clk., receives bids May 1 for 3 bridges in Dist. No. 2 and one bridge in Dist. No. 3.

Miss., Monticello—Lawrence County Bd. of Supvrs., H. J. Patterson, Clk., receives bids May 5 for 3 creosoted approaches to steel bridge across Tilton Creek, and for repairing bridge.

Miss., Rolling Fork—Sharkey County Bd. of Supvrs., W. H. Carroll, Clk., receives bids May 5 for pile bridge over Little Deer

Creek in Rolling Fork; pile bridge over Little Deer Creek north of Blanton. 3-27

Miss., Sardis—Panola County Bd. of Supvrs., J. A. Carter, Clk., receives bids May 5 for 2 bridges and levee embankment: Steel bridge across Peach Creek, on Sardis and Pleasant Grove Highway, east of Pleasant Grove, Dist. No. 2; conc. bridge across branch on Sardis and Pleasant Grove Highway, west of Bob Trotter's Store, Dist. No. 5; road levee embankment on Sardis and Pleasant Grove Highway, Dist. No. 5.

Miss., Tunica—Tunica County Bd. of Supvrs., L. C. Shannon, Clk., receives bids May 5 for pile bridge, approximately 3 spans, over Jerry Lake, east of Tunica; 36-ft. pile bridge over drainage canal through Wesson Place, east of Tunica.

Missouri—State Highway Comsn., receives bids for 31 bridges. See Roads, Streets, Paving.

Mo., St. Louis—War Dept., Washington approved plans Illinois Power & Light Corp., for addition to bridge across Mississippi River, St. Louis; plans provide extension to shore span of single truss near Missouri end of bridge, to allow new rail approach to be constructed.

Okla., Tulsa—City, Dan W. Patton, Mayor, receives bids April 29 for Main St. elevation; K. R. Teis, City Engr.

Tenn., Dandridge—Dept. of Highways and Public Works, Nashville, considering construction of free highway bridge across French Broad River on Dandridge-Newport road, Jefferson County; T. E. McEwen, State Highway Engr.

Tenn., Knoxville—City Council, George Dempster, Mgr., approved plan of Marsh Engineering Co., Des Moines, for designing Henley St. Bridge, containing about 30,000 yd. conc. and 3,500,000 lbs. steel; expect to complete plans for submission to contractors within 6 weeks.

Tex., Brackettville—City receives bids soon for 62-ft. rein. conc. and steel bridge, over Las Moras Creek, cost \$30,000; E. P. Arneson, Engr., 410 Gunter Bldg., San Antonio.

Tex., Fort Worth—City, O. E. Carr, Mgr.; Frisco R. R., F. G. Jonah, Ch. Engr.; St. Louis, and Texas & Pacific Ry. Co., E. F. Mitchell, Ch. Engr. Dallas, plan Henderson St. underpass, costing about \$501,000; D. L. Lewis, City Engr. 3-20

Tex., Van Horn—State Highway Comsn., Austin, plans 240-ft. conc. and steel bridge over White Horse Creek, Culberson County, on Highway No. 1; cost about \$25,000; G. G. Wickline, State Bridge Engr.

Virginia—See Roads, Streets, Paving.

W. Va., Clay—War Dept., Washington, reported, approved plans Clay County Court, to re-construct bridge across Elk River at Clay. 1-30

Va., Harrisonburg—See Roads, Streets, Paving.

Va., Norfolk—City, Walter H. Taylor, 3rd, Dir. of Public Works, received low bid from American Bascule Bridge Co., Pensacola, Fla., on bascule for 50-ft., 54-ft. wide, steel bridge over Lafayette River at Granby St.; Norman Z. Ball, Engr. at bridge. 4-10

West Virginia—State Road Comsn. receives bids for 3 bridges and 4 culverts. See Roads, Streets, Paving.

Contracts Awarded

Miss., Macon—Noxubee County Bd. of Suprvs., C. V. Adams, Chancery Clk., let contract to H. M. Donahoo, 510 N. 21st St., Birmingham, Ala., at \$13,617, for 6 steel and conc. bridges over sloughs in Noxubee River swamp, on Brooksville and Lyon Creek road. 4-3.

N. C., Charlotte—City let contract to Ingalls Iron Works Co., 720 Fourth Ave., S., Birmingham, Ala., for 190 tons fabricated struct. steel for underpass. 4-3.

Miss., Columbus—Lowndes County Bd. of Suprvs., J. J. Richards, Clk., let contract to D. S. McClennahan, Columbus, at \$20,031, for 2 steel bridges over Luxapallila and Yellow Creeks, in Districts 1, 2, 3.

Canning and Packing Plants

Fla., Clewiston—Simmons & Gifford, reported, have contract for packing plant at Lake Harbor near here for L. Maxey, Inc., Frostproof; corrugated iron; 48x96 ft.; install modern machinery.

Fla., Haines City—Carillon Canning Co., Inc., C. M. Pinkston, Sec., has canning plant; will install machinery for canning grapefruit and vegetables; American Can Co., Central Bldg., New York, has portion of contract. See Want Section—Machinery and Supplies.

Fla., Fort Pierce—Indian River Canning Co., capital \$100,000, incorporated; T. S. Kirby, Fort Pierce; John Lochrie, Fort Lauderdale; construct canning plant, S. Second St.; 90x140 ft.; hollow tile.

Tex., Beaumont—Neches Pickle Co., incorporated; A. E. Wenham, 1990 Washington St.

Clayworking Plants

Tex., Eagle Pass—M. Kifuri, reported, establish brick plant; initial capacity 20,000.

W. Va., Clarksburg—McNicol Pottery, Norwood Addition, reported, install additional kiln; cost \$375,000.

Coal Mines and Coke Ovens

Ala., Blossburg—Brookside-Pratt Mining Co., Brown-Marx Bldg., Birmingham, erecting addition to preparation plant at mine to increase daily washing capacity 350 tons; equipment furnished by Montgomery Coal Washing & Mfg. Co., 4400 8th Ave. N., Birmingham; plans installing 3 Deister concentrator tables, mine ventilating fan, haulage locomotive and additional tram cars; plans installing new equipment in New River mine.

W. Va., Buckhannon—James C. Bins, Uniontown, Pa., acquired 3600 acres coal land owned by Buckhannon River Coal Co.

Concrete and Cement Plants

Tex., Waco—American Concrete Products Co., F. A. Folley, Texas Mgr., Andrews Bldg., Dallas, may erect \$50,000 branch plant.

Cotton Compresses and Gins

Ga., Lakeland—J. A. Robinson enlarging capacity of gin 500 to 2000 bales.

La., Gilbert—Farmers Gin Co., Inc., chartered; R. M. Ward.

Tex., Coahoma—Farmers' Co-Operative Gin & Supply Co., incorporated; M. W. Walker, E. T. O'Daniel.

Drainage, Dredging and Irrigation

Ga., Brunswick—Ch. of Army Engrs., Washington, recommended to Congress improvements to harbor, costing \$1,210,000 with \$150,000 annually for maintenance; provide for channel 30 ft. deep, 500 ft. wide at Brunswick Point; channel 27 ft. deep, 350 ft. wide in East River, and channel 27 ft. deep, 300 ft. wide in Turtle River.

Miss., New Albany—Comms., Lappatubby Drainage Dist., Union and Pontotoc Counties, Office of C. Lee Crum, Atty., Courthouse, opens bids May 5 for constructing main canal, canal cleanout and small laterals comprising 100,036 cu. yd. excavation, clearing and grubbing to be included in amount bid for excavation.

North Carolina—U. S. Engr. Office, foot of Front St., Norfolk, Va., opens bids May 14 for dredging, for maintenance purposes, approx. 1,919,639 cu. yd. material in Alligator River, Alligator River-Pungo River Land Cut, Wilkerson Creek, and Pungo River, in

dredged channel of Inland Waterway from Norfolk, Va., to Beaufort Inlet, N. C.; consists of dredging to depth of 14 ft. at mean low water, where this depth does not now obtain; Alligator River, bottom width, 250 ft.; side slopes, 1 on 3; 3.93 mi.; Alligator River-Pungo River Land Cut, bottom width, 90 ft.; side slopes, 1 on 2½; 15.30 mi.; Wilkerson Creek, bottom width, 125 ft.; side slopes, 1 on 3; .23 mi.; Pungo River, bottom width, 250 ft.; side slopes, 1 on 3; .43 mi. 4-17

Texas—W. E. Anderson, San Benito, member, International Water Boundary Comsn., and representatives of large American irrigation interests of Lower Rio Grande Valley, took active steps to file applications with State Bd. of Water Engrs., Austin, for rights to dam sites on international boundary stream; to conserve water supply of Rio Grande for use on both sides of river; 1,000,000 acres estimated subject to irrigation; first dam site probably be selected at Salineno, about 14 mi. west of Roma; electric generating plant planned to furnish power for irrigation; second site, El Jardin; 3 sites being considered in the Big Bend at Mariscal, Bequillas and Santa Helena.

Tex., Freeport—U. S. Engr. Office, Galveston, let contract to Atlantic, Gulf & Pacific Co., 15 Park Row, New York, for dredging 1,810,149 cu. yd. place measurement from within specified limits, 189,851 cu. yd. over depth, Freeport Harbor. 3-27

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

D. C., Washington—Stone & Webster Engineering Corp., 49 Federal St., Boston, advises contract for water walls for Potomac Electric Power Co.'s Benning plant let to Combustion Engineering Corp., 26 Broadway, New York; steam shovel excavation now under way. 3-13

Mo., Bagnell—Stone & Webster Engineering Corp., 49 Federal St., Boston, advises following contracts have been let for Osage power plant of Union Electric Light & Power Co., 12th and Locust Sts., St. Louis: Stage of progress, excavation 50% done; conveyer belts and equipment. Conveyer Weigher Co., 90 West St., New York; 50 ton steam locomotive, Baldwin Locomotive Works, 1010 Pine St., St. Louis; six 33,500 h.p. hydraulic turbines and appurtenances, two 1600 h. p. turbines, placed with Allis-Chalmers Mfg. Co., 50 Congress St., Boston; three 471 h. p. boilers, placed with the Babcock & Wilcox Co., 80 Federal St., Boston. 3-13

Fla., Ocala—City, J. J. Gerig, Mayor, reported, plans improvements to light and power plant; install additional equipment.

Fla., South Jacksonville, Jacksonville—City authorized Marcel Mazeau, City Engr., to call for bids for highway standards to complete white way system Unit No. 1 First Addition to San Marco.

Fla., Tampa—Florida Power and Light Co., Miami, reported, leased property and equipment Sun City Power Co.

Ky., Louisville—Byllesby Engineering & Management Corp., Halford Erickson, V. P. in charge of operation, 231 S. LaSalle St., Chicago, Ill., advises 1930 construction budget for Louisville Gas & Electric Co., operating in Kentucky, amounts to \$4,300,374; major projects included in this amount are interconnecting transmission line from Louisville to Cincinnati, involving estimated expenditures of \$1,750,000, the extension of underground distribution net work in Louisville amounting to \$22,000 and a high tension connection between the Ohio Falls plant and Waterside steam plant, involving expenditure of \$100,000; balance of budget consists of large number of minor projects and extensions to present system; 1930 construction budget for Oklahoma Gas & Electric Co., operating in Oklahoma and Arkansas is \$9,658,348, this includes following: Completion of Belle Isle steam plant, \$3,576,000; completion of Beerbower steam plant, \$261,000; completion of additional boilers at Horseshoe Lake, \$328,000; completion of Cushing tap substation, \$159,000; Oklahoma City 66 kv. loop and switching stations, \$585,000; Oklahoma City Service building, \$325,000; Shattuck, Okla., a new Diesel unit, \$155,000; extension of under ground system, \$151,000; Maud tap, installation of 10,000 kv.-a. synchronous condenser, \$105,000. 4-10

Md., Indian Head—Navy Dept., Bureau of

Yards and Docks, reported, let contract to General Electric Co., Schenectady, N. Y., at \$79,433 for turbo alternator and auxiliary equipment at naval powder plant. 4-3

Md., Leonardtown—Leonardtown Ice Co., construct 40 mile transmission line.

Md., Rockville—Potomac Electric Power Co., 14th and G Sts., N. W., Washington, D. C., advises street lighting system now existing will be improved.

Mississippi—See Ice and Cold-Storage Plants.

Mo., Bagnell—Wickliffe & West, reported, have contract for clearing in Bagnell Dam reservoir area in connection with power plant development for Union Electric Light & Power Co., 12th and Locust Sts., St. Louis; Mississippi Valley Structural Steel Co., 3147 Big Bend Rd., St. Louis, reported, has contract for 600 tons struc. steel. 3-13

N. C., Danbury—Southern Power Co., Charlotte, reported, acquired Westfield power plant owned by R. T. Joyce.

N. C., Nags Head—Fearing Bros., Manteo, plans extension lighting system to Nags Head and Wanchese; negotiating for purchase of plant at Williamston.

N. C., Nashville—Carolina Power & Light Co., Raleigh, reported, acquired Nashville electric system.

N. C., Welcome—Southern Public Utilities Co., 426 S. Church St., Charlotte, reported, acquired Welcome Light & Power Co.

Okla., Stilwell—George S. Fowler constructing brick power house; install 2 Diesel engines; cost \$75,000. 3-6

S. C., Aiken—South Carolina Power Co., Charleston, reported, install white way Richmond Ave., from Laurens to York St.

S. C., Pickens—Town, reported, voted sale of power plant to Southern Power Co., Charlotte, N. C.; plans improvements.

Tenn., Chattanooga—State Railroad and Public Utilities Comsn., Nashville, approved petition of Tennessee Electric Power Co. for issuance of 20,000 shares of 6% preferred stock, valued at \$2,000,000, and reissuance and sale of \$428,400 of 6% preferred stock which has been purchased or repurchased by company. 12-26

Tenn., Madisonville—Mountain Power Co., reported, construct 3 dams on Tellico River above Tellico Plains at junction of North and Middle Rivers, at falls of South River and other near mouth of Lyons Creek, above Tellico Plains; granted franchise for extension hydro electric lines over roads and highways of Monroe county; company also reported, has options on sites at Tellico Plains for erection of rayon mill.

Tenn., Palmyra—Montgomery County Court Commrs., reported, granted franchise to L. F. Stone, for erection power plant; supply towns of Dotonsville, Palmyra, Sallors Rest, Hackberry, Shiloh and Marion.

Texas—E. B. Neiswanger, San Antonio, Pres., Central Texas Power & Light Co., applied to Bd. of Water Engineers, Austin, for permission to develop hydro-electric power plant on Rio Grande River; dam 100 ft. high; divert waters of Pecos to Rio Grande, 8 miles above present outlet. 1-23

Va., Franklin—Monongahela West Penn Public Service Co., Fairmont, W. Va., reported, acquired electric light plant and 20 yr. franchise; may build power line up south branch of Potomac, via Franklin to Monterey and westward to Pocahontas County, south to Bath.

Va., Waynesboro—Virginia Public Service Co., Charlottesville, reported, negotiating for municipal distribution system and light plant on Basic City side of South Fork.

W. Va., Talcott—Virginia Public Service Co., Charlottesville, Va., reported, acquired Talcott Electric Light & Power Co.

W. Va., Welch—City approved lighting system for Virginia Ave. from McDowell St. intersection to intersection with Maple Ave.; installation by Appalachian Electric Power Co., Bluefield.

Flour, Feed and Meal Mills

Mo., St. Louis—Hall Milling Co. and Bernet, Craft & Kauffmann Milling Co., reported, consolidated; will operate as Commonwealth Flour Mills, Inc., capital \$2,000,000; milling capacity 5300 bbls. flour daily; offices of company, 340 Planters Bldg.

Foundry and Machine Plants

Ky., Owensboro—Brewer-Titchener Corp., Courtland, N. Y., acquired majority of common stock in Owensboro Forging Co., making automobile forgings.

Mo., St. Louis—Wrought Iron Range Co., 5661 Natural Bridge Ave., let contract to

Murch Bros. Construction Co., 1759 Ry. Exchange Bldg., for \$20,000 plant: 1 story, 118 x 27 ft., brick, conc. conc. foundation, struc. steel, steel sash, conc. floor; private plans.

Mo., St. Louis—Kinloch Brass Casting Co., Phillip Colonius, 2356 Palm St., let contract to F. F. Mackfessel Construction Co., 6625 Delmar Blvd., for machine shop, 22nd and Howard St.; 1 and 2 story and part basement, 40x105 ft., brick, conc.; private plans. 19

Okla., Oklahoma City—Sherman Machine & Iron Works, R. W. Sherman, Pres., 18-42 E. Main St., rebuilding burned plant with own construction forces.

Tenn., Chattanooga—Simplicity System Co., L. E. West, Volunteer Life Bldg., makers of contractors' equipment, let contract to Rogers and Leventhal, 822 E. 11th St., for plant, Schlar Ave., East Chattanooga; 2 story, brick; Lewis H. Bull, Volunteer Bldg., and Norbert G. Monning, Archt., 513 Arcadia St.

Tenn., Knoxville—Imperial Foundries Co., O. H. Shriver, Pres., 218 Kentucky St., probably rebuild recently burned foundry.

Garages and Filling Stations

Ark., Batesville—White River Chevrolet Co. has \$16,000 sales and service building under construction; native stone, brick.

Ala., Birmingham—McConnell-White-Terry, Bankers Bond Bldg., have permit for \$10,500 garage, 10th Ave. and 20th St., South; 1 story, brick; Moore & Woolley, Inc., 711 S. 27th St., Gen. Contr.

Ark., Waldron—Fuller-Judy Chevrolet Co., capital \$25,000, incorporated; E. M. Fuller, W. E. Judy.

Ark., West Memphis—Dilatash Chevrolet Co., capital \$30,000, incorporated; R. E. Dilatash, Z. T. Bragg.

Ga., Atlanta—Hugh Richardson, Jr., 160 Peachtree St., N. W., let contract to A. K. Adams & Co., 542 Plum St., N. W., for service station, Spring and Harris St., N. W.; 1 story and part basement, 200x100 ft., conc. foundation and area ways, brick, stucco, hollow tile, terra cotta, steel sash, plate glass; Dobbs Consolidated Tire Co., Lessee, 400 W. Peachtree St., N. W.; La Due & Young, Archts., 1144 E. Market St., Akron, Ohio.

Ga., Decatur—Firestone Tire & Rubber Co., 658 Whitehall St., S. W., Atlanta, and Akron, Ohio, let contract to William Alden, Decatur, for \$12,000 service station, Ponce de Leon Ave. 4-3

Ky., Louisville—Haeger & Abbott filed plans for \$10,000 filling station, Woodbourne Ave. and Bardstown Rd.; Gulf Refining Co., Lessee.

Md., Baltimore—Post Office Dept., Baltimore, taking options on sites for garage.

Md., Baltimore—Stewart & Co., Thomas P. Abbott, Pres., Howard and Lexington Sts., take bids in about 2 weeks for \$200,000 warehouse and 40-car garage, 641 W. Saratoga St.; Joseph Evans Sperry, Archt., Calvert Bldg. (See Building News Columns—Buildings Proposed—Warehouses.)

Miss., Isola—Bd. of Supervisors of Humphreys County, A. R. Hutchens, Clk., Belzoni, opens bids May 5 for erecting garage for Road Dist. No. 2.

Miss., Vicksburg—Shell Petroleum Corp., Shell Bldg., St. Louis, Mo., acquired sites for two filling stations, Washington and Belmont St., \$12,000; Cherry and Clay St., \$12,000.

Mo., Kansas City—Firestone Tire & Rubber Co., Akron, Ohio, let contract to Miller-Stauch Construction Co., Ry. Exch. Bldg., for \$90,000 service station, Linwood and Troost St.; 2 story, brick. 4-3

N. C., Mount Airy—B. & H. Service Station, Inc., capital \$40,000, incorporated; D. S. Hodge, F. R. Douthit.

Okla., Oklahoma City—Sooner State Oil Co., M. K. Boldman, Pres., 19 East C St., plans \$30,000 retail store building and service station, Klein and Reno Ave.; buff brick, hollow tile, Spanish type; B. Gaylord Nottger, Archt., 2732 W. 19th St.

Okla., Tulsa—Oliver Davis Oil Co., 325 E. Second St., acquired 100-ft. tract, Sand Springs Rd.; erect filling station and warehouse.

S. C., Florence—Texas Co., P. J. Milo, Supt., Equipment and Construction Div., 720 San Jacinto St., Houston, Texas, let contract to Southern Builders, Inc., Florence, for filling station; no equipment to be purchased in this connection. 4-10

Tenn., Memphis—Louisiana Oil Refining Co., First Nat'l Bank Bldg., Shreveport, La., leased site for \$30,000 service station.

Tenn., Memphis—J. M. Walker, Pres., O.

K. Storage & Transfer Co., 161 Jefferson Ave., erect \$10,000 filling station and \$10,000 refreshment stand, Union Ave. and Avalon St.; Estes W. Mann, Archt., Cotton Exchange Bldg.

Tex., Harlingen—J. M. Nix, 205 Travis St., San Antonio, advises, intends erecting garage in Harlingen but date of beginning construction not decided. 4-17

Tex., Victoria—Humble Oil & Refining Co., Humble Bldg., Houston, acquired Lowe lot, Main St. and Goodwin Ave., for filling station; J. D. Broussard, Victoria, to have charge of station.

Va., Gate City—Sinclair Refining Co., 45 Nassau St., New York, acquired oil and gas stations of W. B. Fulton here and at Clinchport.

Va., Chatham—Rex Motor Co., Inc., capital \$50,000, chartered; J. Hurt Whitehead.

Va., Portsmouth—Darst Tire & Battery Co., Inc., K. G. Darst, Pres., 1209 High St., changing name to Darst Super Service, Inc., and increasing capital stock, \$15,000 to \$25,000.

Va., Richmond—George H. Whitefield, 1516 Westwood Ave., let contract to Ancarrow & Noble, 617 W. Main St., for filling station; plans by Texas Co. 4-17

Va., Roanoke—Enfield Buick Corp., capital \$50,000, incorporated; Frank W. Rogers, Boxley Bldg.

W. Va., Charleston—Standard Oil Co., Davidson Bldg., started excavating for service station, MacCorkle Ave. and Kanawha City bridge approach; pave space 150 x 100 ft.

Gas and Oil Enterprises

Ark., Texarkana—M. W. Greeson, Prescott, reported, granted 40 yr. gas franchise.

Fla., Miami—Price Oil & Gas Co., incorporated; V. P. Williams, 1430 S. Bay Shore Drive.

Ky., Covington—Burke Oil Sales Co., capital \$25,000, incorporated; Wm. F. Burke, T. E. Cobb.

Ky., Harlan—Gibson Oil Co., capital \$20,000, incorporated; H. C. Smith, Robert Gibson.

Ky., Owensboro—Pierce Moseley, reported, acquired franchise; construct electric line from Owensboro to Collyer's station in Daviess county.

Ky., Wicksbury—Elkhorn Gas Co., capital \$50,000, incorporated; C. H. Fraim, T. T. Webb.

La., Natchitoches—Lucy Strike Oil Co., Inc., chartered; O. S. Haworth, Natchitoches, O. L. Hayne, Mansura.

La., Shreveport—United Gas Corp., incorporated; C. H. Lewis, Geo. T. Naff, both Slattery Bldg.

Miss., Jackson—Majestic Oil & Gas Co., capital \$50,000, incorporated; Walter W. Capers, 705 N. State St.

Mo., Springfield—Ford, Bacon & Davis, Inc., 39 Broadway, N. Y., established local office in Wilhoit Bldg., reported, making survey of Ozark region of Central Missouri and other areas north of here with view to pipeline construction; project in charge of William Von Phul, Jr.

N. C., Asheville—Asheville Gas Co., H. E. McDonnold, Mgr., reported, plans extension gas mains.

N. C., Wilmington—Ocean Oil Corp., capital \$100,000, incorporated; C. Hughes Jones, Kenneth R. Jones, II.

Oklahoma City—Indian Territory Illuminating Oil Co., H. V. Foster, Pres., Drawer L, construct gasoline and compressor plant, Sec. 31-11-2, addition to Bodine plant, 24-11-3, and Verne plant 13-11-3; install gas compressors, gas engines, cooling coils, etc.; expend \$500,000; Paul C. Wallack, Constr. Engrs., 642 Commerce Exchange Bldg.; construction by company's forces. 4-10

Oklahoma City—Sinclair Consolidated Oil Corp., 45 Nassau St., N. Y., reported, that the board, subject to approval of stockholders, plans increasing common capital of company from 10,000,000 to 20,000,000 shares, additional shares to be used for properties or in connection with consolidations with other companies; consolidation with Prairie Oil & Gas Co., Independence, Kans., still pending.

Okla., Ponca City—Empire Oil & Refining Co., Bartlesville, construct two 118,000 bbl. tanks for crude oil storage, two 37,500 bbls. and two 25,000 bbl.; steel ordered for 25 miscellaneous run-down tanks of about 2500 bbl. capacity each.

Okla., Tulsa—Standard Oil Co. of Indiana, 910 S. Michigan Ave., Chicago, Ill., reported, negotiating for McMan Oil & Gas Co., Drew Bldg.

S. C., Columbia—W. A. Crary & Son, 1226 Sumter St., constructing oil plant on Gervais St. for Standard Oil Co. of New Jersey, 700 Pendleton St.; excavation under way; work on foundation of office building begun. 9-19

S. C., Union—D. L. Thomson, Chicago, and Cincinnati, reported, granted gas franchise; R. M. Ranche, Engr.

Tenn., Nashville—Negotiations, reported, underway for merger of gas and lighting properties of United Gas Improvement Co., Philadelphia, Pa., and Public Service Corp. of New Jersey; merger would involve properties with total assets of more than \$1,300,000,000; company owns majority of voting common stock of Nashville Gas & Heating Co., Nashville, and other Southern companies.

Tenn., Newport—Southern Engineering & Management Corp., Chicago, Ill., reported, applied for natural gas franchise.

Texas—O. R. Seagraves, of Moody-Seagraves Co., Houston, reported, interested in formation of combination of natural gas resources operating in Midwest and Southwest; Missouri Valley Gas Co., subsidiary, is constructing gas pipe line from Stevens County, Kan., to Omaha, Neb.; companies included in combination are United Light & Power Co., 72 W. Adams St., Chicago; North American Light & Power Co., 231 S. La Salle St., Chicago, and Lone Star Gas Co., 1915 Wood St., Dallas; Lone Star Gas Co. owns and operates natural gas system in Southwest, supplying Dallas Fort Worth and Wichita Falls; plans call for immediate construction pipe lines into Texas Panhandle to augment present reserves. 4-3

Tex., Boerne—C. W. Arlitt, Scarborough Bldg., Austin, reported, negotiating for artificial gas franchise.

Tex., Dallas—Continental Petroleum Corp., Ponca City, Okla., reported, plans \$90,000 oil storage and distributing plant, including tanks, pumping machinery, etc.; plant to be operated by Holland-Martin Oil Co., Dallas, local representative.

Tex., Ganger—Schiller, Bruska Oil Co., capital \$45,000, incorporated; J. F. Bruska, W. A. Klecka.

Tex., Houston—Directors of Houston Oil Co. of Texas, Petroleum Bldg., ratified plan to revamp capital structure, retiring \$7,000,000 outstanding issue of 10 yr. 5½% sinking fund convertible notes at 102½ and interest, a 10% stock dividend, a split up of both common and preferred shares on basis of 4 new shares of \$25 par for each \$100 par share now outstanding and a new issue of \$12,000,000 10-yr. bonds without conversion features; directors authorized immediate issue and confirmed sale of \$12,000,000 10 yr. 5½% bonds to Mackubin, Goodrich & Co., Baltimore, Md., and Whitaker & Co., St. Louis, Mo.; proceeds to be used for retiring outstanding balance of approximately \$7,000,000 of 5½% convertible notes of company; new indenture will provide for total issue of \$25,000,000 bonds to take care of future expansions and development, including increasing natural gas pipe line facilities of Houston Pipe Line Co., (subsidiary) and provide funds to develop oil resources.

Tex., Liberty—Sun Oil Co., Chester, Pa., reported, construct 12 mile of 6-in. pipe line, to connect Barbers Hill and West Dayton field; construct 80,000 bbl. steel tank at North Dayton.

Tex., San Antonio—Yuba Oil Co., capital \$25,000, incorporated; J. B. Morton, 103 McLane St.

Tex., Waka—Waka Consumers Oil Co. incorporated; M. Berry, J. V. Stump.

Tex., Wichita Falls—Continental Refining Co., Oil City, Pa., reported, construct six 55,000 bbl. storage tanks.

Tex., Wichita Falls—Oasis Oil Co., incorporated; Elsie E. Wright, 1501 Giddings St.

Tex., Wortham—Gandy-Peyton Oil Co., incorporated; F. G. Peyton, L. O. Ganady.

W. Va., Charleston—Lewis Oil Co., capital \$150,000, incorporated; F. N. Stambaugh, Kanawha Natl. Bank Bldg.

W. Va., South Charleston Ind. Branch, Charleston—Carbide & Carbon Chemical Co., reported, construct two 6-in. pipe lines for natural gas and by-products from eastern corporate limits of city to point on south bank of Kanawha River.

Ice and Cold-Storage Plants

Fla., Fort Lauderdale—Chamber of Commerce interested in erecting cold-storage warehouse.

Ga., Montezuma—See Miscellaneous Enterprises.

La., Shreveport—D. Fazzio, Harts Island Rd., plans \$10,000 ice plant; E. A. George, Archt.

Mississippi—Mississippi Power Co., A. L. Oesterle, Operating Mgr., Gulfport, advises regarding acquisition of ice and power plants in South Mississippi towns, do not have, as yet, plans worked out in connection with improvements for these properties; they will, in time, be connected up to purchasers transmission system and rehabilitation work necessary to put them in first class condition will be done; some of electric distribution systems will have to be rebuilt, and some work will be necessary to put ice plants in proper shape. 4-17

Mo., Butler—Clinton Ice Co. erect ice and cold-storage plant.

N. C., Henderson—George A. Harris erecting \$25,000, 22-ton ice plant.

Okla., Erick—Erick Ice Co. owned by Hill & Anderson, 10 East 10th St., Oklahoma City, erecting 10-ton ice plant.

S. C., Charleston—J. B. Howe, Nashville Trust Bldg., Nashville, Tenn., let contract to V. L. Nicholson, 102 W. Clinch Ave., Knoxville, Tenn., for ice plant; rein. conc., struc. steel, brick, tile, built-up roof; plans by York Ice Machinery Co., Houston St., N. E., Atlanta. 3-27

Tenn., Chattanooga—King, Dobbs & Co., Henry King, Pres., E. 11th and King St., wholesale grocers, advise regarding report that company would erect \$1,250,000 warehouse and cold-storage plant: "Project now only in formative stage." 4-17

Tex., Quanah—Max Bergman has plans for modern cold-storage plant.

Tex., Weatherford—A. M. Lee erecting \$40,000 ice plant. S. Main St.

Va., Richmond—Richmond Ice Co., 1123 W. Broad St., erecting refrigerated ice station, Fulton, and office, Harrison and Marshall St.

Iron and Steel Plants

Ala., Birmingham—Ingalls Iron Works Co., R. I. Ingalls, Pres., 720 Fourth Ave., S., Birmingham, reported, announced purchase of Bollinger-Andrews Construction Co. and Pennsylvania Fabricating Co., Verona, Pittsburgh, Pa., to be combined with Ingalls Iron Works Co. and Birmingham Tank Co., both Birmingham; \$1,000,000, reported, involved in purchase and rehabilitation.

Land Development

Ark., Little Rock—K. E. N. Cole, 4316 S. Lookout St., developing Normandy, subdivision, Prospect Ave. and Q St.; plan 1 public and 3 private parks; install sewer system; construct pavement; water from spring in addition will be utilized for swimming pool. 4-17

D. C., Washington—Maryland Commonwealth Realty Co., capital \$50,000, incorporated; L. L. Bowen, 1329 Jefferson St., N. W.

Fla., Fort Pierce—F. C. Spadaro & Co., incorporated; A. Adams, F. C. Spadaro.

Fla., Frostproof—Lake Ida Groves Corp., incorporated; J. W. and A. L. Keen.

Fla., Miami Beach—T. Daniels, 893 S. W. Eleventh Ave., Miami, reported, low bidder for water main installation, fire hydrants, etc., for Indian Creek Golf Club; Watson & Garbis, Engrs., Hill Bldg., Miami. 4-17

Fla., St. Petersburg—Omaha Properties, Inc., chartered; H. W. Holland, Florida Theatre Bldg.

Fla., West Palm Beach—South Indian River Farms, Inc., chartered; A. A. Lefebvre, 611 33rd St.

Ga., Augusta—John E. Reed, 2812 Hillcrest Ave., plans \$75,000 improvements to Westover Memorial Park.

Ky., Louisville—Omar Realty Co., incorporated; Lydia K. S. Barfield, 665 S. 35th St.

La., New Orleans—Rose Realty Corp., capital \$75,000, incorporated; B. D. and Rose Morris, 1406 Dryades St.

La., New Orleans—McClure Realty Co., Inc., capital \$100,000, incorporated; Robt. C. McClure, 1104 Carrollton St.

La., New Orleans—Northus Holding Corp., capital \$500,000, incorporated; G. Owen Vincent, 207 Carondelet St.

Mo., Kansas City—Merritt Realty Co., incorporated; Cyrus D. Kinne, 5739 Virginia St., Kansas City; John A. Rohan, 5912 Cates St., St. Louis.

Mo., Kansas City—Dr. L. E. Faris, Plaza Bank Bldg., and associates, reported, develop 80 acres Seventy-first St. and Blue Ridge Blvd., for cemetery; create series of lakelets; impound waters of spring; develop rock gardens; build roadways; erect chapel and probably a mausoleum, etc.; Hare & Hare, Landscape Archts.

Mo., Kansas City—Bergmore Realty Co., incorporated; A. I. Morris, 3141 Karnes Blvd.

Mo., St. Louis—Lister Real Estate & Investment Co., incorporated; Robt. Lister, 5047 Alaska St.

N. C., Kinston—Kinston Development Co., capital \$100,000, incorporated; T. W. Mewborn, 110 E. Blount St.

Okla., Miami—Se Miscellaneous Construction.

Tex., Beaumont—Tyrrell-Combest Realty Co., 256 Pearl St., acquired 100 acres 1 mile from Caldwell.

Tex., Harlingen—T. J. Gage, 64 W. Rand St., Chicago, Ill., acquired and will develop 10,000 acres in citrus fruits; will clear; install system of conc. irrigation canals and roads. 4-10

Tex., Houston—C. I. Fortinberry and associates interested in organizing company to develop Cedar Crest Cemetery, 14 acres on Cedar Bayou Rd.

Tex., Houston—Pecan Acres, Inc., L. E. Brazleton, Pres., San Jacinto Trust Bldg., developing 426 acres Fort Bend County for pecan culture.

Tex., Port Arthur—Harry Swan, develop subdivision, Brinkman Addition.

Va., Norfolk—Mitchell Avenue Realty Corp., capital \$50,000, incorporated; C. W. Whitehurst, 922 Harrington Ave.

Va., Norfolk—Livingston Corp., incorporated; P. W. Thomas, Haddington Bldg.

Va., Norfolk—Macon Avenue Realty Corp., capital \$50,000, incorporated; A. B. Seldner, Dickson Bldg.

W. Va., Welch—Jargo Realty Co., capital \$30,000, incorporated; J. C. Summers, M. M. Bank Bldg.

Lumber Enterprises

Ala., Ozark—Reed Lumber Co. erect plant and reopen concentration yard.

Fla., Crawfordville—Brown Bros., Gainesville, acquired Higer Island Hickory Co.

La., Shreveport—Robinson-Slagle Lumber Co., Inc., Wilmer S. Slagle, Sec., 1401 Abbie St., increasing capital to \$300,000.

Mo., Hermann—Peach Valley Lumber Co., capital \$18,500, incorporated; Paul Schueltz, Charles Baumstark.

Mo., St. Louis—Hafner Lumber Co., J. A. Hafner, Pres., 110 Dock St., rebuilding and remodeling 2-story building, recently damaged by fire.

Metal-Working Plants

Tex., El Paso—Western Roofing & Sheet Metal Co., capital \$10,000, incorporated; W. H. Peterson, 3003 Wheeling St.

Mining

N. C., Charlotte—Prospect Mining Co., capital \$100,000, incorporated; E. E. Pickard, Lookout Mountain, Chatahoochee Tenn.

N. C., Raleigh—Henderson Quarries, Inc., chartered; Hubert White, 6616 Malvern St., Philadelphia, Pa.

Miscellaneous Construction

Arkansas—U. S. Engr. Office, P. O. Box 667, Vicksburg, Miss., opens bids May 16 for constructing approx. 4,385,000 cu. yd. earthwork, South bank of Arkansas River in Arkansas, designated by name, item and section number, character of construction, estimated cubic yards, average height: Below Jefferson-Lincoln County Line, Item 25, Sec. 2, enlargement, constructing turnover 410, 000, 14 and 15 ft.; Round Lake to Old River, Item 25, enlargement, new levee, turnover, 645,000, 14 and 15 ft.; Kimbrough to Keekatoe Levee, Item 28, enlargement, turnover, 525,000, 16, 18 and 19 ft.; Upper State Farm Levee, Item 29, enlargement, turnover, 425, 000, 18 ft.; Lower State Farm Levee, Item 31, turnover, 400,000, 18 ft.; above Auburn Levee, Item 32, enlargement, new levee, 330,000, 15, 16 and 19 ft.; Auburn to Douglas Levee, Item 33, enlargement, 450,000, 17 ft.; below Douglas to South Bend Levee, Item 36, enlargement, turnover, 675,000, 18 and 19 ft.

Arkansas—See Memphis, Tenn.

Arkansas—See Vicksburg, Miss.

D. C., Washington—Suburban Gardens, Inc., has permit for \$12,000 swimming pool, 5000 Haynes St., N. E.; concrete.

Fla., Miami Beach—City Council granted permits to following for constructing docks: Mrs. Leona E. Whitman, east side of Indian

Creek between 33d and 34th St.; Charles A. Harrington, Indian Creek and 31st St.; Buckingham Miller, southeast corner of Palm Island; A. E. Waldbridge, Sunset Lake north of 21st St.; Bath Club, replacement of conc. seawall, Indian Creek.

Kentucky—See Memphis, Tenn.

Louisiana—See Vicksburg, Miss.

Miss., Biloxi—Harrison County Road Protection Comsn., Gulfport, selected H. D. Shaw, Gulfport, as engineer for 7000-ft. section of seawall to be constructed on shore of Gulf of Mexico, Holmhaven to Hartsease Park. 4-3

Miss., Greenville—Chamber of Commerce interested in establishing river terminal.

Miss., Vicksburg—U. S. Engr. Office, P. O. Box 667, opens bids May 16 for constructing approx. 10,400,000 cu. yd. earthwork, Mississippi River, in Mississippi, Arkansas and Louisiana, designated as following by name, side of river, item number, location, character of construction, estimated cubic yards, average height in feet: Catfish Point Enlargement, east bank, 14, 418L, enlargement, 1-166,000, 25 and 27; below Greenville New Levee, east bank, 16, 482L, New Levee, 4-215,000, 20, 22, 24 and 25; Grand Lake New Levee, west bank, 18, 510R, new levee, 2,963, 000, 22, 23, 26, 28 and 30; Duckport New Levee, west bank, 20, 595R, new levee, 1,252, 000, 21.

Missouri—See Memphis, Tenn.

Okla., Miami—City plans \$10,000 swimming pool; expend \$5000 for cobblestone bathhouse with individual lockers, upon completion of pool and bathhouse, will landscape park surrounding pool.

Okla., Ponca City—Ponca City Milling Co. advises let contract to Jones-Hettelsater Construction Co., Mutual Bldg., Kansas City, Mo., for storage elevator; rein. conc.; 21 bins, total capacity of 326,000 bu.; machinery include: 3000 bu. elevator leg with 2 grain conveyor belt; cost \$70,000. 4-17

Tenn., Memphis—U. S. Engr. Office, McCall Bldg., opens bids May 6 for 29,700 ft. permeable pile dikes, Mississippi River; Item (a), 5000 lin. ft., Dorena Landing Vicinity, Mo. (37-40, below Cairo); Item (b) 5000 lin. ft., Island 8 Vicinity, Ky. (42-45, below Cairo); Item (c) 6000 lin. ft., Toney's Towhead Vicinity, Ky. (76-79, below Cairo); Item (d) 5500 lin. ft., Caruthersville Vicinity, Tenn. (110-113, below Cairo); Item (e) 8200 lin. ft., Ashport-Goldust Vicinity, Ark. and Tenn. (154-160, below Cairo). 4-17

Tenn., Nashville—Austin Peay Memorial Comsn., A. B. Broadbent, Chrmn., Clarksville, plans letting contract soon for erecting monument within state capitol grounds; authorized by 1929 General Assembly.

Tex., Houston—Laclede Steel Co., Arcade Bldg., St. Louis, Mo., has contract for 1400 tons rein. steel for public grain elevator of Port Comsn.; Folwell Engineering Co., Gen. Contr., 1333 N. Michigan Ave.; John S. Metcalf Co., Engr., 111 W. Jackson Blvd., both Chicago, Ill. 3-13

Tex., Port Arthur—Laclede Steel Co., Arcade Bldg., St. Louis, Mo., has contract for 2400 tons conc. bars for seawall of City of Port Arthur; W. Horace Williams Co., Inc., Gen. Contr., 833 Howard Ave., New Orleans; J. B. Converse & Co., Inc., Engr., Industrial Bldg. 2-20

Tex., Port Arthur—City probably take bids in few days for 3 remaining units of sea wall; will include dirt embankment around city from Lakeview Addition to point on west side where wall is to connect with present levees, pumping units and steel foundation unit between Sabine Towing Co. and Port Arthur planing mill; J. B. Converse & Co., Inc., Engr., Industrial Bldg., Port Arthur, and State Office Bldg., Mobile, Ala. 2-20

Tex., Wichita Falls—Following have sub-contracts connection with storage elevator of General Mills, Inc., Minneapolis, Minn.: Cement, Dewey Portland Cement Co., Dewey, Okla.; sand and gravel, Moore & Moore, Chillicothe; form lumber, Foxworth Galbraith Lumber Co., Wichita Falls; rein. steel, Sheffield Steel Corp., Kansas City, Mo.; foundation mattresses now being poured, Barnett & Record Co., Gen. Contr., Minneapolis, Minn. 3-13

Va., Richmond—Virginia Citizens' Carillon Committee, Granville G. Valentine, Chrmn., 12 E. Franklin St., will inaugurate state-wide campaign to raise minimum of \$75,000 for purchasing singing bells for State War Memorial, Byrd Park, on site donated by city; Virginia General Assembly made available immediately \$75,000 and War Memorial Comsn. authorized to contract for additional \$175,000 of work.

Miscellaneous Enterprises

Ark., Almyra—Almyra Elevator & Rice Milling Co. plans rebuilding plant recently burned with \$30,000 loss.

Ark., Eureka Springs—R. R. Thompson, owner of Eureka Springs Water Co., acquired Magnetic Water Co.

Ark., Little Rock—Arkansas Democrat Co., 613 E. Main St., let contract to McGregor & Pickett, A. O. U. W. Bldg., for \$250,000 newspaper plant; 80x140 ft., 3 story, basement, fireproof, elevators, sprinkler equipment; other contracts to be let in next 10 days; Thompson, Sanders & Glinichio, Archt., Hall Bldg.

Ark., Little Rock—Wood Chemical Products Co., G. W. Phillor, Pres., capital \$60,000, incorporated; erect plant to manufacture chemical products and by-products from waste wood, minerals, weeds, grasses, straw, rubber, oils, gases, fluids, etc.; products to include charcoal, pyroligneous acid, fir oil, wood alcohol, turpentine, flotation oil for mining purposes, special gas used in welding, fertilizers, disinfectants, perfumes and carbo; plans for building to be worked out within 30 days; temporary headquarters, Donaghey Bldg.

Ark., Little Rock—Kroger Grocery & Baking Co., 813 Main St., Cincinnati, Ohio, expanding approximately \$100,000 remodeling warehouse and general office building, Third and Ferry St.; improvements to include new tracks for unloading merchandise from freight cars, new sheltered loading track for trucks, modern cold storage plant; remodeling stores over state.

Fla., Homestead—Redland Printing Co., incorporated; August J. Schumacker, Gladys McKinney.

Fla., Jacksonville—Southland Dairy Products Co., Inc., chartered; George W. Milam, Greenleaf Crosby Bldg.

Fla., Lakeland—National Gateway Advertising Co., incorporated; Bradford G. Williams, S. J. Causey; advertising, publishing, etc.

Fla., Miami—Modern Remedies, Inc., chartered; A. M. Roseberry, 1023 S. Miami Ave.

Fla., Oneco—Georgia-Florida Marble & Granite Co., Asa L. Wooten, Mgr., start erecting monumental carving plant at once; install pneumatic air carving tools and sand-blasting process will be used in working stone.

Fla., Panama City—Southern Kraft Corp., J. H. Friend, V. Pres., 406 Michigan Ave., Mobile, Ala., subsidiary of International Paper Co., 100 E. 42nd St., New York wires; "Southern Kraft Corp. plans immediate construction, 200 ton kraft mill Panama City, Fla.; design and construction by their own engineering forces." 4-17

Fla., Tampa—Cleo Co. of America, R. A. Thorne, Pres., Pierce and Polk Sts., started \$15,000 general repair work on cleo syrup and ice cream concentrate flavoring plant; install mixing machines, motors, pumps, bottling and washing machines, costing \$15,000. See Want Section—Machinery and Supplies.

Fla., Tampa—Florida Asphalt Pavement Mfg. Co., incorporated; J. L. Cone, 6020 River Terrace.

Ga., Montezuma—W. R. Tucker, Agricultural Development and Immigration Agt., Birmingham & Coast R. R. Co., 26 Cain St., N. W., Atlanta, Ga., reported, announced organization of Icebound Products, Inc., to erect plant here to freeze and market Georgia peaches. (See Atlanta, 12-19.)

Ky., Lexington—Dixie Roofing & Paint Co., capital \$15,000, incorporated; D. E. Mulholland, J. R. Smith.

Md., Baltimore—Russia Cement Co., N. C. Phillips, Pres., Gloucester, Mass., advises: "At present time are not contemplating addition to plant of Victor G. Bloede Co." 4-17

Miss., Greenville—R. S. Dunn & Co. let contract to Monis Lancaster for \$20,000 laundry, Hunt and Bell Aire St.; 40x80 ft., frame.

Miss., New Augusta—American Pine Products Co. erecting retort plant to extract pine oil, resin and other products; Ingalls Iron Works Co., 704 Fourth Ave., S., Birmingham, Ala., has contract for struc. steel.

Mo., Crystal City—Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh, Pa., reported, announced plans to erect \$1,000,000 addition to glass plant to increase capacity 3,000,000 sq. ft. yearly; to be used to produce crude glass; 325 long, width varying from 100 to 50 ft., 40 to 60 ft. high; construction to be started within 2 weeks and completed in less than a year. Company wires: "Crystal City expenditure involves principally equipment which will be manufactured within our organization."

Mo., Kansas City—Western States Life

Assurance Co., Elmer S. Bagley, Pres., 10 S. Central Ave., Clayton, acquired American Savings Life Insurance Co., 714 Board of Trade Bldg., Kansas City.

Mo., St. Louis—Adjustable Apron Co., Louis Apple, Pres., 1121 Washington Ave., formed as subsidiary of Apple Hat Co.; manufacture adjustable apron; occupy 5000 sq. ft. floor space and install equipment costing \$10,000.

Mo., St. Louis—Modern View Printing & Publishing Co., capital \$30,000, incorporated; A. B. Frey, 208 N. Broadway.

Mo., St. Louis—Mednik Wiping Materials Co., 804 S. Broadway, capital \$20,000, incorporated; Carl M. Vetsburg, 1010 Pine St.

N. V., Winston—Rankin Ice Cream Co., capital \$50,000, incorporated; Mrs. A. J. Rankin, 610 Avon Rd., Roanoke, Va.; T. R. Rankin, Big Stone Gap, Va.

Okla., El Reno—Mrs. Ellen Price, Chickasha, acquired Standard Creamery.

Okla., Tulsa—Tulsa Overall & Mfg. Co., R. D. Sanford, Pres., 715 N. Elwood St., erect plant with 30 doz. daily capacity; 50x150 ft., brick, conc., glass, 1 story; building, \$18,000; equipment, approx. \$25,000. 4-17

S. C., Columbia—Central Ice Cream Co., W. H. Caughman, Mgr., 1114 Senate St., let contract to C. M. Lide, Hook Bldg., for \$75,000 ice cream plant, Main and Pendleton St.; 1 story and basement, 94x93 ft., brick, tar and gravel roof; Wessinger & Stork, Archts., Arcade Bldg.

Tenn., Kingsport—Pet Milk Co., Shell Bldg., St. Louis, Mo., starting erecting plant, Clay and Market Sts.; 60x80 ft., 2 story.

Tenn., Kingsport—Tennessee Eastman Corp., reported, soon start work on plant unit to manufacture hydroquinone, used in photographic industry; single building, 60x140 ft., 1 and 4 story; to be in operation about Oct. 1.

Tex., Marshall—Texas Milk Products Co., increasing capital.

Tenn., Memphis—Automobile Rotary Lift Co., R. J. O'Brien, 1055 Kentucky St., increasing capital, \$200,000 to \$500,000.

Tex., Austin—City completing plans for abattoir and soon call for bids; to be leased to individual or firm; M. L. Diver, Engr., Calcasieu Bldg., San Antonio; Hugo F. Kuehne, Archt., Littlefield Bldg., Austin. 3-13

Tex., Dallas—Queen City Printing Ink Co. of Texas, 1804 Jackson St., changing name to International Printing Ink Corp.

Tex., Edna—Chamber of Commerce negotiating with Houston firm for establishing milk station.

Tex., Freeport—Broad Street Building Co., incorporated; J. B. Breckenrough, G. C. Hardman.

Tex., Houston—Star Engraving Co., 1501 Walker Drive, let contract to J. B. Townsend, Post-Dispatch Bldg., for \$100,000 plant and office, 3201 Buffalo Drive; 80x245 ft., Spanish design; install equipment to manufacture steel and copper plate engraving and jewelry; R. D. Steele, Archt., First Natl Bank Bldg. 11-28-29

Tex., McAllen—Corns China Co., Wellsville, Ohio, manufacturer of bathtubs, kitchen sinks, chinaware, pottery, etc., reported, negotiating to establish \$400,000 plant in near future; owns large deposits of kaolin south of Reynosa on 32,000-acre lease.

Tex., Waco—J. F. Johnson Construction Co., capital \$75,000, incorporated; O. K. Johnson, 605 N. 23rd St.

Va., Hopewell—A. O. Smith Corp., Milwaukee, Wis., reported, has contract for tanks for plant of Atmospheric Nitrogen Co., 61 Broadway, New York; 2 units, 85 ft. long, 100 in. diam., weighing 270,000 lb. each.

Va., Norfolk—Clifton Hogshead Chemical Corp., capital \$150,000, incorporated; Clifton Hogshead, 107 Bank St.

Va., Richmond—Chero-Cola Bottling Co. of Virginia, Inc., W. T. Blackwell, Pres., 811 Hermitage Rd., changing name to Nehi Bottling Co., Inc.

Va., Lynchburg—Southern Poultry & Produce Co., Inc., capital \$15,000, chartered; Ivan D. Wood, 306 Warwick Lane; J. E. Snell, Box 536.

Va., Meadow View—Darter Creameries, Inc., O. L. Darter, Bristol, Va., acquired Meadow View Creamery; install additional creamery machinery from Creamery Package Mfg. Co., 2312 Walnut St., Philadelphia, Pa. (See Bristol, 4-10.)

W. Va., Martinsburg—National Fruit Product Co., Inc., Woodward Bldg., Washington, D. C., advises regarding acquisition of Cumberland Valley Fruit Products Co. plant; "We do not have at this time any plans for expansion of plant or for any new construction." 4-10

Motor Bus Lines and Terminals

La., Lake Charles—E. R. Kaufman, Kaufman Bldg., 725 Bilbo St., and Mrs. A. W. Mayer, 707 Bilbo St., let contract to Knapp & East, Kaufman Bldg., for \$27,000 bus station, Broad and Bilbo Sts.; 1 story, 70x150 ft., Spanish type, stucco; Southland-Greyhound Co., E. R. Eckstrom, Pres., Lessee, Union Bus Station, San Antonio; Dielmann & Levy, Archts. and Engrs., State Natl. Bank Bldg., Corpus Christi, Tex.; I. C. Carter, Asso. Archt., Kaufman Bldg., Lake Charles. 3-27

Tex., Beaumont—Eastern Texas Electric Co. plans substituting buses for trolley service on oyal St. Route.

Va., Norfolk—Virginia Beach Bus Lines, Inc., P. W. Bogert, Pres., 1415 Cloncurry Rd., acquired equipment and franchises of McPherson Bus Line, operating buses between Norfolk, Va., and Elizabeth City and Washington, N. C.; plans purchasing new equipment; sale approved by North Carolina Corporation Comsn., Raleigh, N. C.; plans extending Virginia Beach service to Portsmouth.

W. Va., Clarksburg—Blue & Grey Transit Co., Virginia and Alderson St., Charleston, applied to State Road Comsn., Charleston, for permission to operate motor buses between Clarksburg and Grafton.

Railways

Florida—Seaboard Air Line Ry. Co., W. D. Faucette, Ch. Engr., Savannah, Ga., reported, expend approx. \$2,000,000 in Florida during current year; nearly 125 mi. of track to be relaid with new 100-lb. rail between Palatka and Sanford, between Thonotosassa and Dunnellon and between Bradenton and Sarasota; important main and branch lines will be ballasted with 200,000 yd. of stone ballast, from Hernando County and with 100,000 yd. of slag, including lines from Jacksonville to Tampa via Orlando and via Newberry, and between Thomasville and Dunnellon, Haines City and Clewiston and other sectors; branch lines between Lake Placid and Harrisburg, Punta Gorda and Acland, and from Fort Mason to Altoona will be relaid with heavier rail; install automatic signals over approx. 100 mi. of main line between Jacksonville and Tampa; present plans call for installing signal system, Yukon, just outside of Jacksonville, south to Winter Park.

Fla., Fort Lauderdale—Broward County Port Authority, reported, concealed contract to construct Port Everglades Terminal R. R., extending from municipal slips to Port Everglades to point ¾ mi. south and thence westward to cross Florida East Coast and Seaboard Air Line, 4½ mi. long; soon let new contract. 7-25

La., Shreveport—Louisiana & Arkansas Ry. Co., W. F. Wright, Pur. Agt., reported, ordered 500 tank cars from General American Tank Car Corp., 230 S. Clark St., Chicago, Ill.

Tex., Greenville—Louisiana Ry. Navigation Co. of Texas changing name to Louisiana, Arkansas and Texas Ry. Co.

W. Va., Hinton—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, reported, plans several construction projects between Minton and Clifton Forge; construct tunnels, lay tracks, etc.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Ala., Mobile—Mobile County Bd. of Revenue considering expending \$400,000 for roads. See Financial News Columns.

Ala., Tuscaloosa—City plans paving several blocks on Thomas Circle.

Ala., Montgomery—City, W. A. Gunter, Mayor, plans paving Bibb and Bell Sts., Moulton to Catoma; J. M. Garrett, City Engr.

Ark., Pine Bluff—Jefferson County Court, R. H. Williams, Judge, plans organizing \$30,000 paving dist. for south Pine Bluff, to be known as Jefferson County Paving Dist. No. 4, to pave 8 streets in Dist., including Ash, Mulberry, Linden St.

D. C., Washington—Dist. Commrs. received low bid from E. B. Donaldson & Brother, 2225 Lawrence St., N. E., at \$113,800 for repairing about 14 mi. 6-ft. cement sidewalk. 4-10

Florida—State Road Dept., Tallahassee, plans hard-surfacing 28 mi. State Highway No. 20, between Cottondale, Jacksonville

and Bayou George, Bay County; B. M. Duncan, State Highway Engr.

Fla., Milton—Santa Rosa County Comms. plan asphaltting Milton-Bagdad road.

Fla., Panama City—State Road Dept., Tallahassee, plans improving Road No. 10, Gulf Coast Highway in Bay County, from end of paving west of Hathaway Bridge to point past Sharpless' pavilion on gulf beach; B. M. Duncan, State Highway Engr.

Georgia—State Highway Bd., Atlanta, receives bids May 6 for 5 roads, costing about \$825,000: Lowndes-Echols Counties—6 mi. paving below Valdosta toward Florida line; Macon County—10 mi. paving, Montezuma to Fort Valley; Laurens County—12 mi., from Dublin on Savannah road; Hall County—10 grading, between Gainesville and Lula; Thomas County—1 mi. grading, paving, south of Thomasville; receives bids May 14 for 11 projects totalling about \$2,000,000; W. R. Neel, State Highway Engr.

Ga., Atlanta—City, I. N. Ragsdale, Mayor, plans widening Whitehall St.; Fulton County plans expending about \$80,000 for paving.

Ga., Atlanta—U. S. Veterans' Bureau, L. H. Tripp, Ch. of Construction, Washington, received low bid from Wm. S. Hansell, 27 Exchange St. S. E., at \$17,532, for conc. service roads at U. S. Veterans' Hospital No. 48, Peachtree St. 4-3

Ky., Morganfield—Union County plans expending \$150,000 to repair roads. See Financial News Columns.

Ky., Williamsburg—State Highway Comsn., Frankfort, plans survey of proposed road from Corbin to point near Whitley City, on Federal Highway No. 27, via Cumberland Falls, Whitley County.

Louisiana—Louisiana Highway Comsn., Baton Rouge, received low bids for 6 roads: Caldwell Parish—6 mi. grading, draining, Columbia-Chatham road, Robinson Construction Co., Centerville, Miss., \$29,202; Beauregard Parish—7.7 mi. grading, DeQuincy-Kinder road, Robinson Construction Co., \$24,492; Allen Parish—5.3 mi. grading, Kinder-DeQuincy road, Robinson Construction Co., \$24,827; Grant Parish—5 mi. grading, draining, Dry Prong-Verda road, Robinson Construction Co., \$19,163; West Carroll Parish—2.5 mi. surfacing, Epps-Oak Ridge road, J. E. McKeithen, Grayson, La., \$11,620; 2.5 mi. surfacing, Kilbourne-Concord School road, J. W. McKeithen, \$10,246; H. B. Henderlite, State Highway Engr.

Maryland—State Roads Comsn., Baltimore, receives bids April 29 for 7 roads: Anne Arundel County—4.68 mi. conc. shoulders, Baltimore-Annapolis Blvd., Sweetzer's Bridge to Glenburnie, Cont. AA-66, 711; Baltimore City—64 mi. sheet asphalt, Arlington Ave., Hillen road to Grindon Ave., Cont. BC-89-72; Carroll County—1 mi. conc., from New Windsor-Libertytown road to Marston, Cont. CI-74-52; Cecil County—52 mi. conc., Elkton-Fair Hill road to Providence Mills, Cont. CE-85-24; Frederick County—1.86 mi. conc., from Urbana Pike near Hyattstown to Green Valley, Cont. F-122-54; Washington County—2.12 mi. conc. or macad., from end of Cont. W-60, at Fort Frederick toward Clearspring, Cont. W-73-64; 4.5 mi. grading, draining, Williamsport Pike, Hagerstown to Williamsport, Cont. W-76-68; L. H. Steuart, Sec.

Miss., Holly Springs—Marshall County Bd. of Supvrs. plans expending \$35,000 for road north and south of Red Banks, Road Dist. No. 1; 4 mi. road from Red Banks to Kilpatrick Hill 4 mi. south to Hernando; 1 mi. east from Hernando road. See Financial News Columns. 3-20

Miss., Pittsboro—Calhoun County Bd. of Supvrs. plans expending \$100,000 for surfacing roads in Supvrs. Dist. No. 1. See Financial News Columns.

Miss., Poplarville—Pearl River County Bd. of Supvrs., H. K. Rouse, Ck., receives bids May 5 for 18 mi. gravel Picayune-Bogalusa public road from end of Goodyear Bridge, near Picayune to Cross-Roads.

Miss., Tunica—Mayor and Bd. of Aldermen, W. G. Jaconess, Town Ck., receive bids May 6 for 2,094 sq. yd. conc. paving, 6,229 lin. ft. 24-in. curb and gutter, etc.

Miss., West Point—City, T. B. Miller, Ck., plans paving North Dinison St.

Miss., Yazoo City—City, Bd. of Mayor and Comms. plan about 2 mi. street paving.

Missouri—State Highway Comsn., Jefferson City, receives bids April 29 for 81 roads and 31 bridges: Caldwell County—2,239 mi. 30-ft. graded earth, Kingston, north and south, 52,654 cu. yd. excavation, 163,500 lb. struct. steel; bridges over Shoal and Log Creeks, deck girders and trusses; Clinton County—2,521 and 2,584 mi. 18-ft. gravel, Lathrop west to Route 69, 28,642 cu. yd. excavation, deck girder bridge over Shoal Creek; Worth County—1,629 mi. 13-ft., grav-

el. Route 46 to Isadora, 10,042 cu. yd. excavation, Charlton County—3,534, 3,252, 3,245 mi. 18-ft. gravel, Glasgow, north, 12,525 cu. yd., paving, 7,105 cu. yd. excavation; Grundy County—rebuild bridge over Honey Creek drainage ditch, from Trenton, east, 74,530 lb. struct. steel; Putnam County—782 mi. 18-ft. gravel, Livonia east and west, 18,784 cu. yd. excavation; Randolph County—3,406 and 3,617 mi. 24-ft. graded earth, Moberly-Higbee road, 39,071 cu. yd. excavation, bridge over Creek.

In Audrain County—2,003, 3,227, 3,939 and 3,950 mi. 16 and 18-ft. gravel, Route 54-Rush Hill, and Centralia-Randolph County roads, 161,018 cu. yd. excavation, 14,754 cu. yd. paving; bridges over Sailing and Long Branches, and Goodwater Creek; Boone County—1,629 mi. 18-ft. gravel Centralia-Randolph County road, 20,298 cu. yd. excavation; Clark County—4,621, 4,788 and 4,686 mi. 30-ft. graded earth, Iowa Lime-Kohoka, 155,742 cu. yd. excavation, bridge over Fox River, 56,420 lb. struct. steel; Marion County—3,451 and 1,904 mi. 18-ft. conc., Taylor-Quincy road, 38,565 cu. yd. excavation, 35,900 sq. yd. paving, bridge over drainage ditch; Benton County—3,239 mi. 30-ft. graded earth, Cole-Camp-Morgan County, 41,186 cu. yd. excavation; Clay County—4,190 and 4,047 mi. 16-ft. gravel, Liberty-Kearney, 7,704 cu. yd. paving; Johnson County—4,053 and 4,350 mi. 24-ft. graded earth, Holden-Pittsfield road; 31,172 cu. yd. excavation, bridge over Shafer Branch.

In Lafayette County—760 and 3,662 mi. 18 and 20-ft. conc., Lexington-Higginsville road, 30,949 cu. yd. excavation, 47,949 sq. yd. paving; Ray County—4,884 mi. 12-ft. chat, Hardin-north, 37,895 cu. yd. excavation; bridge over drainage ditch; Cole County—1,720, 1,383 and 3,102 mi. 18-ft., bit. surface treatment, Jefferson City-south, 9,313 cu. yd. excavation, 207,591 gallons; Cooper County—2,878, 2,782 mi. 18-ft. crushed stone, Saline south, 57,243 cu. yd. excavation, 7,100 cu. yd. excavation; 246 mi. 18-ft. gravel, Otterville-Syracuse, 11,248 cu. yd. excavation, bridge over Lamine River; Maries County—4,599 mi. 20-ft. conc., Vichy-Phelps, 11,618 cu. yd. excavation, 54,089 sq. yd. paving; Jefferson County—115 mi. 18-ft. conc., Near Crystal City, 5,587 cu. yd. excavation; bridge over branch.

In St. Francis County—400 mi. 20-ft. conc., Farmington-Route 61, 5,014 cu. yd. excavation; St. Louis County—2,610, 1,919, 4,875, 490 mi. 20 and 40-ft. conc., Pattonville-Kirkwood road, 202,163 cu. yd. excavation, 123,651 sq. yd. paving; bridges over branch of River des Peres, over Two Mile Creek; 1,079 mi. 56-ft. conc. St. Louis-Weber road, 7,508 cu. yd. excavation, 36,325 sq. yd. paving; Warren County—2,625 mi. 18-ft. gravel, Hawk Point-Warrenton road, 43,301 cu. yd. excavation bridge over north branch of Dry Branch; Christian County—2,382 mi. 18-ft. conc., Ozark, north, 39,575 cu. yd. excavation, 25,389 sq. yd. paving; 3,042 and 3,163 mi. 16-ft. gravel, Sparta-Chadwick road, 15,334 cu. yd. excavation; Greene County—4,764 mi. 18-ft. gravel, Route 12-Walnut Grove, 60,910 cu. yd. excavation, 12,193 cu. yd. paving; Hickory County—3,030 mi. 12-ft. gravel, Route 54-Elkton, 8,300 cu. yd. excavation.

In Phelps County—3,708, 4,209, 2,975, 3,061, 3,139, 3,901, 2,233 and .072 mi. 20-ft. conc., Lebanon-Rolla, Rolla-West and Rolla-North, 135,097 cu. yd. excavation, 277,040 sq. yd. paving; Polk County—2,906, 4,382 mi. 18 and 16-ft. gravel, Greene County-Brighton, and Brighton-Morrisville road, 56,770 cu. yd. excavation, 7,736 cu. yd. paving, bridge over Sac River; Pulaski County—4,905, 2,905, 1,797 and 4,991 mi. 20-ft. conc., Waynesville, East and West, 154,082 cu. yd. excavation, 172,843 sq. yd. paving; Stone County—3,484 mi. 16-ft. gravel, Route 43-Hurley, 18,780 cu. yd. excavation, bridge over Creek; Webster County—4,524 mi. 16-ft. gravel, Marshfield-Biggins road, 11,591 cu. yd. excavation; Dent County—2,594, 4,199, 4,254 mi. 16-ft. gravel, 162,829 cu. yd. excavation, 10,371 cu. yd. paving; bridges over Meramec River, and over Branches.

Shannon County—1,806, 2,165 and 3,251 mi. 16 and 18-ft. gravel, Birch Tree-Winona road, 170,657 cu. yd. excavation, 8,543 cu. yd. paving; bridges over Spring Valley, Dry Wash; Texas County—4,305 mi. 16-ft. gravel, Plato-Roby road; Wright County—3,426 mi. 18-ft. gravel, Norwood-East; 1,108 mi. 18-ft. gravel, through Mansfield, 8,789 cu. yd. excavation, 268 mi. 18-ft. gravel, Mansfield-Overhead, 8,161 cu. yd. excavation, bridge over St. L. & F. R. R.; Butler County—4,489 and 1,761 mi. 12-ft. gravel, Quin-Fagus road, 17,913 cu. yd. excavation, 6,265 cu. yd. paving; bridge over drainage ditch; Madison County—2,509 mi. 12-ft. gravel, Route 61-Higdon, 13,845 cu. yd. excavation; Miss-

issippi County—3,648 mi. 7-ft. gravel, East Prairie-Pull Tight road; Pemiscot County—3,153 and 3,125 mi. 12-ft. sand, Route 61-Wardell, 16,834 cu. yd. excavation; bridge over drainage ditch, 32,400 lb. struct. steel; T. H. Cutler, Ch. Engr.

Missouri—State Highway Comsn., Jefferson City, plans letting contract soon for 2 roads; Atchison County—13 mi. paving from Fairfax to Craig, 9 ft. conc. and 10 ft. gravel; Holt County—6½ mi. paving, Highway No. 1, from north to south county line; T. H. Cutler, Ch. Engr.

Mo., Boonville — Palestine Special Road Dist., Cooper County, plans expending \$50,000 to gravel about 31 mi. road. See Financial News Columns.

Mo., Doniphan—City, J. C. Jones, Ck., plans expending \$16,000 for grading, curbing, paving, gutter in Dist. No. 1; W. A. Fuller Co., Engr., 2916 Shenandoah Ave., St. Louis. 4-3

Mo., Kansas City—City, Matthew S. Murray, Dir. of Public Works, plans asphaltic conc. surface on Woodland St.; asphaltic conc. or vitrified brick surface on Thirteenth St.; 8-in. conc. pavement and curbing on Seventy-third, Fifty-fifth St., Vineyard road; 8-in. pavement on Thirty-seventh St.; curbing on Ewing; sidewalk on Elmwood St.

Mo., Jefferson City—City receives bids May 5 for 3966 cu. yd. excavation, 3650 sq. yd. cement conc. paving, 2200 lin. ft. combination curb; F. E. Ross, City Engr.

Mo., Moberly—City Council plans expending about \$100,000 to resurface 2 main streets, being links in Highways No. 63 and 24.

Mo., Sedalia—City, C. O. Mansker, City Engr., drawing plans for paving Osage St., cost \$30,000.

Mo., St. Louis—City, Bd. of Public Service, receives bids April 29 to improve and rebuild 9 streets and 8 alleys, including Courtois, Schirmer, Setins St.; W. W. Horner, Engr.

Mo., St. Louis—City, Bd. of Public Service, receives bids May 6 to improve various alleys.

Mo., St. Louis—City, Bd. of Public Service, receives bids May 6 to improve Chippewa St., Gravois Ave. to Morgan Ford road; W. W. Horner, City Engr.

N. C., Marshall—Madison County Comms. plan road building. See Financial News Columns.

Oklahoma—State Highway Comsn., Oklahoma City, receives bids May 19 for 4 roads: Carter County—.67 mi. rein. conc., U. S. Highway No. 77; Love County—23.25 mi.; Garvin County—16.24 mi.; Bryan County—12.0 mi. U. S. Highway No. 75; Logan County—8.2 mi. State Highway No. 33, west from Guthrie; A. R. Losh, State Highway Engr.

Oklahoma—State Highway Comsn., Oklahoma City receives bids April 28 for 3 roads: Woods County—9.74 mi. grading, draining, U. S. Highway No. 64, west of Alva; Osage and Washington Counties; 7,564 mi. State Highway No. 25, west from Bartlesville; Pushmataha County—8.3 mi. U. S. Highway No. 271; A. R. Losh, State Highway Engr.

Okl., Oklahoma City—City, E. M. Fry, Mgr., plans paving Independence Ave. and Thirty-ninth St.; paving with asphalt Villa Ave.; widening Hudson Ave. with conc.; W. W. Small, City Engr.

Okl., Oklahoma City—City, E. M. Fry, Mgr., received low bid from Connolly Bros., Magnolia Bldg., at \$6,742, for paving Twenty-third St.; from Earl Baker Co., Perrine Bldg., \$18,577 for 7-in. conc. paving Grand Blvd.

S. C., Anderson—City Council plans expending \$15,000 to curb and drain streets in North Anderson.

S. C., Greenville—City plans paving Elford St. 30 ft. wide, from Townes St. to Lavinia Ave.

Tennessee—Dept. of Highways and Public Works, Nashville, receives bids May 16 for 8 roads, costing over \$1,000,000: Wilson County—9.2 mi. grading, draining, Highway No. 24, Davidson County to Martha; Hamilton County—8 mi. paving, Highway No. 27, Valdeau to Stringer Ridge tunnel; Hickman County—4 mi. grading, draining, Highway No. 48, Nunnally to Highway No. 100; Henderson County—9.5 mi. grading, draining, Highway No. 20, Lexington to Darden; Knox County—7.2 mi. grading, draining, Highway No. 9, Knoxville to Trentville; Washington County—7 mi. grading, draining, State Highway No. 107, Greene County line to Conklin; Fayette-Hardeman Counties—18.4 mi. grading, draining, Highway No. 18, from Route 57, near Lagrange, to Route No. 15, near Bolivar; Marshall County—11.1 mi. paving, T. E. McEwen, State Highway Engr.

Tenn., Chattanooga—City, Roger Crox, Commr., considering widening Georgia Ave. 17 ft. between Ninth and Oak St.; cost about \$40,000.

Tenn., Kingsport—City plans widening Boone St. about 3 ft. and paving with conc.

Tenn., Memphis—City, O. I. Kruger, Commr., plans receiving bids soon to repave and widen various streets; Wm. B. Fowler, City Engr.

Texas—State Highway Comsn., Austin, plans hard-surfacing State Highway No. 71, between Bastrop, Bastrop County and Austin, Travis County; Gibb Gilchrist, State Highway Engr.

Tex., Anahuac—Chambers County, L. R. Miller, County Judge, will expend \$17,000 toward 14 mi. Galveston-Beaumont road via High Island through county.

Tex., Austin—City, Adam R. Johnson, Mgr., plans paving East Sixteenth St. with 2-in. Warrentite bitulithic on 5-in. conc. base and West Twenty-fourth St. with 2-in. Warrentite bitulithic on 6 in. conc. base; L. M. Chokla, Paving Engr.; H. R. F. Helland, Conslt. Engr.

Tex., Austin—City, Adam R. Johnson, Mgr., plans 4050 sq. yd. 2-in. Warrentite bitulithic paving on conc. base, 40 ft. wide, West 12th St., cost about \$8000; 15,000 sq. yd. Warrentite bitulithic on conc. base, 40 ft. wide, Enfield road, estimated cost \$30,000; 4900 sq. yd. East Twenty-second St., 36-ft. wide; 18,000 sq. yd. 6-in. rein. conc. paving, 36 ft. wide, Red River St., estimated cost \$40,000; 5450 sq. yd. 2-in. Warrentite bitulithic on 6-in. conc. base, East Ave., estimated cost \$13,000; L. M. Chokla, Paving Engr.; H. R. F. Helland, Conslt. Engr.

Tex., Benjamin—Knox County, Oliver W. Lee, Judge, plans 12,700 sq. yd. grading, draining, Highway No. 24, Benjamin to King County line; H. S. Kerr, Res. Engr., Seymour.

Tex., Brownwood—Brown County, E. M. Davis, Judge, plans 12,972 sq. yd. grading, draining, Highway No. 7, from Coleman County line to Brownwood; Leo Ehlinger, Res. Engr.

Tex., Dallas—Dallas County Commrs., Court, Charles E. Gross, County Auditor, receives bids May 1 for about 3.1 mi. rebuilding, widening, draining, paving Maple Ave. from Mocking Bird Lane to Bachman Dr., and conc. paving from Bachman Dr. to connection with Dallas Northwest Highway; Rollins & Clinger, Dist. Engrs., Records Bldg.

Tex., Fort Worth—Tarrant County plans paving Belknap St. extension to intersection of Frey Ave. and Race St.; D. A. Davis, County Engr.

Tex., Goose Creek—City Council plans expending about \$68,000 to pave 19 additional blocks paving, 30 and 40 ft. wide, including Ashbel, Jones, Whiting, etc.

Tex., Houston—City, Fred W. Turner, Sec., receives bids soon to pave West Gray St. from point west of Waugh Dr. to Shepherd Dr.; plans paving Chartres St., Cleburne to Boldgett, cost \$24,750; G. L. Fugate, Acting City Engr.

Tex., Houston—City, W. E. Monteith, Mayor, considering paving Lyons Ave. from end of present paving to city limits at Deepwater Ave.; G. D. Fugate, Acting City Engr.

Tex., Lagrange—Fayette County plans expending \$110,000 for roads in Road Dist. No. 2. See Financial News Columns.

Tex., Livingston—City plans expending \$25,000 for street improvement. See Financial News Columns.

Tex., Marfa—State Highway Comsn., Austin, plans 120 mi. 20-ft. wide, black top roads in Presidio County; Gibb Gilchrist, State Highway Engr. See Financial News Columns.

Tex., Ozona—Crockett County plans expending \$375,000 toward building 82 mi. Old Spanish Trail, and paving highway from Ozona to Barnhart. See Financial News Columns. 2-20

Tex., Rosebud—City receives bids soon for alternate types paving 11 blocks in business dist., 30-40 ft.; J. Rady, Engr., Waco.

Tex., San Antonio—City, C. M. Chambers, Mayor, received low bid from Colglazier & Hoff, 125 Crosby St., at \$16,892 to improve New Braunfels Ave.; at \$8404 to improve Miller St.; I. Ewig, City Engr. 4-10

Tex., Taft—City plans expending \$105,000 for street paving. See Financial News Columns. 3-27

Tex., Wheeler—State Highway Comsn., Austin, completing surveys and plans on Highway No. 33-A, Wheeler County, from Gray-Wheeler line to county seat; completed survey for Highway No. 66, from Oklahoma line, across county, east and west to Gray County line; Gibb Gilchrist, State Highway Engr.

Virginia—State Highway Comsn., Richmond, receives bids May 6 for 4 roads and bridge: Middlesex County—5.4 mi. grade, drain, Route 38, from point north of Saluda to Essex County line, 32,448 cu. yd. excavation; Pulaski County—4.5 mi. bit. material, Route 10, from point west of Radford to Dublin; 50,000 gal. bit. material; Tazewell County—6 mi. macad., Route 128, from Bluefield to Pocahontas, 20,458 cu. yd. excavation, 64,987 sq. yd. macad.; bridge over Laurel Fork, 15,355 lb. rein. steel; Halifax County—3 mi. soil, Route 12, from point west of Banister River to point east, 86,291 cu. yd. excavation, 43,084 lb. rein. steel, 10,252 cu. yd. soil; C. S. Mullen, State Highway Engr.

Virginia—State Highway Comsn., Richmond, received low bids for 2 roads: Amherst County—2.992 mi. macad., from point south of Amherst, south, Echols Bros., Inc., Alderson, W. Va., \$51,224; Isle of Wight County—5.96 mi. gravel, Windsor to Zuni; Perkins & Barnes Construction Co., Inc., Blackstone, Va., \$91,628; C. S. Mullen, Ch. Engr. 4-3

Va., Roanoke—State Highway Comsn., Richmond, allocated \$100,000 for 4.7 mi. 30-ft. one course macad. State Highway No. 33, from north corporate limits of Roanoke City to intersection with State Route 208; 25,219 cu. yd. excavation, 53,046 cu. yd. macad.; C. S. Mullen, Ch. Engr.

West Virginia—State Road Comsn., Charleston, receives bids May 13 for 19 roads, 4 culverts and 3 bridges: Barbour County—1.2 mi. grading, draining, Philippi-Clarksburg road; Boone County—11 mi. gravel surface, Danville-Woodville road; 3 mi. grading, Whitesville-Coal River road; Clay County—10.6 mi. cement, Kanawha County Line-Two Run road; Grant County—4.5 mi. grading, rebuilding Northwestern Turnpike, including Germania Bridge approach; .03 mi. cement, Petersburg St.; 3 culverts on Maysville-Scherr road; Greenbrier County—6 mi. grading, draining, North Caldwell-White Sulphur Springs road; .4 mi. widening base and retread surface, White Sulphur Springs Project 1408, road; Hampshire County—10.8 mi. grading, draining, shale surface, Woodrow-Statesville road; Hardy County—two 20-ft. conc. spans, Dumpling Run Culvert; 9.4 mi. grading, draining, Baker-Lost River road; Lewis County—6.8 mi. cement, Walkersville-Braxton County line; Lincoln County—6 mi. grading, draining, Yawkey-Alum Creek; Mingo County—5.3 mi. cold tar surface treatment, Williamson-Nolan; Morgan County—8 mi. modified bit. macad., Great Cacapon-Largent road; Putnam County—2.2 mi. cold tar surface treatment, Poca-Kanawha County line road; Raleigh County—16.8 mi. cold tar surface, Harper-Dameron road; Wayne County—11.1 mi. cold tar surface, Mingo County line-Bull Creek; 62.2 mi. cold tar surface, Routes No. 8, 24 and 75; Raleigh County—conc. arch, Glenn Hedrick bridge; 100-ft. steel pony truss superstructure on conc. substructure, Raleigh Bridge; Boone County—80-ft. steel pony truss superstructure on conc. substructure, Big Horse Creek Bridge; Wetzel County—4.6 mi. cement, Paden City-New Martinsville road; Mason, Putnam and Kanawha Counties—about 65,000 lin. ft. wire rope guard rail on Charles-Point Pleasant road.

W. Va., Beckley—City plans expending \$200,000 to improve and widen North Kanawha St. See Financial News Columns.

W. Va., Bluefield—City, Elmer C. Barton, Mgr., plans resurfacing Union St. with 2-in. penetration asphalt macad., from Essex St. to conc. pavement; surface treat section west of Essex St.

W. Va., Martinsville—State Road Comsn., Charleston, making survey for relocating U. S. Route 250, Wetzel County; plans widening route between Littleton and Burton.

W. Va., Webster Springs—Town Council receives bids May 10 for grading, draining and paving about 1 mi. streets.

Contracts Awarded

Ark., Little Rock—Connelly Paving Co., Home Insurance Bldg., Little Rock, plans beginning in about 2 weeks to widen Scott St. and rebuilding conc. base and asphalt top on Main St.; cost about \$50,000.

Ala., Mobile—Mobile County Bd. of Revenue and Road Commrs., A. D. Davis, Chmn., let contract to Mobile Construction Co., Lowenstein Bldg., at \$173,014, for 7 mi. Mt. Vernon-Citronelle road, from Mt. Vernon west; at \$132,537, for 7 mi. Mt. Vernon-Citronelle road, Citronelle to Improvement Ord. 13-C, to Hancock Bros., 310 St. Michael St., at \$250,479, to complete Tanner-Williams road; John R. Peavy, County Highway Engr. 2-13

Ga., Columbus—City, Henry B. Crawford,

Mgr., let contract to Campbell Contracting Co., 1312 10th Ave., Columbus, at \$22,236, to pave Ninth St. and curb and gutter Seventeenth and Eighteenth St. 4-3

La., Tallulah—City let contract to Couch Construction Co., Dothan, Ala., \$35,000, for grading, curbing, gutters and 9000 sq. yd. conc. paving.

Miss., Gulfport—Harrison and Jackson Bd. of Supvrs. let contract to Southern Paving Co., Gulfport, at \$15,050, for paving .543 mi. State trunk road between Biloxi and Ocean Springs; 6143 sq. yd. cement. 4-3

Miss., Indianola—City let contract to Dunn Construction Co., Inc., Lincoln Life Bldg., Birmingham, Ala., at \$33,891 for Warrentite bitulithic on sand clay gravel base, paving and storm sewers; W. B. Montgomery, Ch. Engr., Jackson; G. S. Covert, Res. Engr. 4-3

Mo., Webster Groves—City, Maurice A. Mudd, Clk., let contract to C. M. Berry Construction Co., 2732 Sutton Ave., Maplewood, at \$24,694, for paving Lockwood Ave.; John Clayton, City Engr.

Mo., Westplains—City, J. P. Harlon, Mayor, let contract to H. Proserpi & Son, 1220 N. Campbell St., Springfield, \$45,767, for 20 blocks of paving; Russell & Axen, Engrs., McDaniel Bldg., Springfield. 4-3

Oklahoma—State Highway Comsn., Oklahoma City, let contract for 3 roads: Ottawa and Delaware Counties—5.6 mi. conglomerate gravel, U. S. Highway No. 66, Afton to junction on State Highway No. 25, Brooks & Dalhlgren, 321 Insurance Bldg., Oklahoma City, \$73,259; McClain and Cleveland Counties—4.2 mi. conc., State Highway No. 7 and 9, south of Oklahoma County line, Ellis & Lewis, Surety Bldg., Muskogee, \$78,593; Kay County—4.1 mi. conc., State Highway No. 11, Grant County line east, Hyde Construction Co., Enid, \$51,070; A. R. Losh, State Highway Engr. 4-10

Okl., Oklahoma City—City, E. M. Fry, Mgr., let contract to Western Paving Co., 610 Grand St., \$28,600, to pave with asphalt Villa Ave.; to M. A. Swatek Construction Co., 5194 W. Main St., at \$5,100, to widen Hudson St.; W. W. Small, City Engr.

South Carolina—State Highway Dept., Columbia, let contract to C. Y. Thomason, Greenwood, for 4 roads: Anderson County—paving approaches to overhead near Belton; paving gaps between Anderson and Williams Counties; Greenville County—paving gap at overhead near Fountain Inn; paving gap at overhead near Greenville; Ben M. Sawyer, Ch. Highway Commr. 4-10

Tenn., Memphis—City, D. C. Miller, Clk., let contract to Schevenell Construction Co., 1280 Walker Ave., at \$8453, to widen intersection of Summer Ave. and East Parkway.

Texas—Connelly Paving Co., Home Insurance Bldg., Little Rock, Ark., has contract for 21 mi. asphalt surfacing in 3 counties; Titus, Bowie and Red River; work in progress.

Tex., Crane—Crane County Commrs., let contract to L. W. Pelfrey, Breckenridge, for hard surfaced road from Ector County line through Crane to Upton County line; \$300,000 available. 3-20

Tex., Dallas—Dallas County Commrs., Court, Charles E. Gross, Auditor, let contracts to Central Bitulithic Co., Praetorian Bldg., Dallas, at \$161,706, for paving Kessler Outer Blvd. No. 3; to T. H. Johnson, N. Texas Bldg., at \$50,931 for bridges. 3-27

W. Va., Wayne—Wayne County Court let contracts for grading, draining and gravel surfacing 3 roads in Ceredo Dist., totalling about \$53,000; 2 mi. Broad Hollow-Cemetery road, south of Ceredo, A. A. Bostic, Huntington; 2½ mi. White's Creek road, Blair & Trent Construction Co., Lexington, Ky.; 1 mi. Kenova-Wayne road, S. C. Isaacs & Co., West Hamlin.

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ky., Louisville—Commrs. of Sewerage, Woolsey M. Cate, Technical Engr., plans \$2,000,000 southwest outfall sewer from Cane Run Rd. to Ohio River, 2 miles; plans ready about May 15; sewer is portion of \$4,000,000 project scheduled for completion in 1930. See Want Section—Bids Asked. 4-17

La., Bastrop—City, A. C. Volk, Engr., plans constructing 20 blocks sewerage in northeast section.

Md., Baltimore—Angelozzi Constr. Co., White St. and Belle Vista Ave., low bidder at \$135,258 for Storm Water Contr., No. 110; W. C. Briddell Co., Inc., 100 N. Eutaw St., has contract at \$230,325 for San. Contr. No. 263. 4-10

Md., Baltimore—Bd. of Awards receives bids April 30 for sanitary sewers and storm drains, Storm Water Contr. 146. See Want Section—Bids Asked.

Md., Cambridge—City, C. L. Dail, Clk., receives bids about May 1 for \$25,000 sewer extension.

Miss., Indianola—See Roads, Streets, Paving.

Miss., Jackson—W. C. Trotter, Sec. Mississippi Building Comsn., New State Capitol Bldg., receives bids May 2 for water, sewerage and electrical distribution system at Isom Hall Law School and cafeteria buildings at University of Mississippi, Oxford. See Want Section—Bids Asked.

Miss., New Albany—C. Lee Crum, Atty., Courthouse Bldg., receives bids May 5 for main canal, canal cleanout and small laterals, 100,036 cu. yds. excavation, clearing and grubbing, etc.

Mo., Jefferson City—City receives bids May 5 for sewers in Sewer Dist. No. 48, No. 48. See Want Section—Bids Asked.

Mo., Lebanon—City, F. E. Rains, Clk., reported, plans sanitary sewers; Russell & Axon, Engrs., McDaniel Bldg., Springfield.

Mo., Platte City—City, reported, let contract to J. O'Neil, Leavenworth, Kansas, for furnishing and laying 18,000 ft. 8-in. c. i. pipe; Pittsburgh Des Moines Steel Co., Des Moines, I., for tank and tower; Southwest Pump and Machine Co., 2710 McGee St., Kansas City for pumps.

Mo., Warsaw—See Water Works.

N. C., Charlotte—City advises no date fixed as yet for \$250,000 sanitary sewer program; Wayt Thomas, City Engr.

Okla., El Reno—Earl W. Baker & Co., Perrine Bldg., Oklahoma City, reported, low bidder for sanitary sewer, Dist. 23, Hill Crest Addition.

Tenn., Chattanooga—City receives bids May 9 for sewage treatment works. See Want Section—Bids Asked.

Tenn., Knoxville—E. H. Reeder Construction Co., 5511 Georgia St., Birmingham, Ala., has contract at \$370,000 for trunk line sewer, N. Broadway.

Tenn., Loudon—See Water Works.

Tenn., Memphis—Edward De Julio, 1123 S. 21st St., South Bend, Ind., low bidder at \$165,000 for sewers in annexed territory. 4-10

Tex., Houston—City, Fred W. Turner, City Sec., will call for bids for 36-in. storm sewer extension Brays Bayou Channel in MacGregor Way project.

Tex., Mineral Wells—Militia Bureau, War Dept., reported, appropriated \$15,000 for permanent sewer system at Camp Wolters; Capt. Fred W. Eldminston, Brigade Adlt., 56th Cavalry Brigade, Texas Natl. Guard.

Telephone Systems

Fla., Jacksonville—Heming Park Building Co., subsidiary of Telfair Stockton & Co., opens bids May 5 for \$250,000 building, W. Duval and Laura St.; Western Union Telegraph Co., Inc., Lessee; Marsh & Saxelbye, Architects, Consolidated Bldg.; Stone & Webster Engineering Corp., Engr., 49 Federal St., Boston, Mass. 4-17

Ky., Paducah—Paducah Broadcasting Co., Pierce E. Lackey and Fred Olcott, applied to Federal Radio Comsn., Washington, for authority to establish broadcasting station in Hotel Ritz; 1350 kilocycles, 250 watt.

Mo., Kansas City—WHB Broadcasting Co., granted construction permit by Federal Radio Comsn., Washington, to move transmitter from 200 Union Station Plaza, to 14th, Knox to Jasper St., and install new equipment.

Mo., Springfield—C. L. Carrell applied to Federal Radio Comsn., Washington, for permission to anchor portable station, formerly WIBJ, to operate on 1200 kc., 100 w.; also to anchor portable station, formerly WKBG, to operate on 1200 kc., 100 w.

Okla., Wapanucka—Southwestern Bell Telephone Co., C. W. Mier, Engr., Telephone Bldg., Oklahoma City, has plans in progress for repeater building: 1 story and basement, 50x66 ft., brick, fireproof; I. R. Timlin, Archt., Telephone Bldg., St. Louis, Mo.

Tex., Dallas—Southwestern Bell Telephone Co., B. D. Hull, Ch. Engr., Telephone Bldg., drawing plans for Avondale Exchange: 2 story, part basement, 76x26 ft., brick, conc.; I. R. Timlin, Archt., Telephone Bldg., St. Louis, Mo.

Tex., Fort Worth—L. G. Gilbert Estate, 401 Houston St., erect building, Third and Main St., costing \$185,000 including equipment; 75x100 ft.; Western Union Telegraph Co., Inc., A. C. Farmer, Supt., 701 Main St.

Tex., San Antonio—Southwestern Bell Telephone Co., B. D. Hull, Ch. Engr., Dallas, let contract to McKenzie Construction Co., Smith-Young Tower, San Antonio, for \$2,500,000 administration and equipment building, Martin St. and Municipal Auditorium Grounds; 8 story and basement, approx. 212x121 ft., brick, steel, struc. clay tile, stone, granite, terra cotta, metal terrazzo floors; elevator contract let to Otis Elevator Co., 11th Ave. and 26th St., New York; B. D. Hull opens bids Apr. 28 on plumbing, heating and ventilating and electric work; J. R. Timlin, Archt., Telephone Bldg.; W. J. Knight & Co., Wainright Bldg., ngr., both St. Louis. 3-27

Tex., Sherman—Southwestern Bell Telephone Co., B. D. Hull, Ch. Engr., Telephone Bldg., Dallas, drawing plans for repeater station, Luella, southeast of here, for underground telephone cable to be laid between Oklahoma City, Okla., and Dallas.

Virginia—Independent Publishing Co., 339 Pennsylvania Ave., N. W., Washington, D. C., to install automatic frequency control in station WJSV, Mount Vernon Hills.

W. Va., Fairmont—Holt Rowe Co., capital \$100,000, incorporated; A. M. Rowe, 105 Adams St.; operate broadcasting station, etc.

Textile Mills

Alabama—Ernest J. Stringham, 40 E. Thirty-fourth St., New York, reported, organized Knit Goods Corp., under laws of Delaware, to take over controlling interest in Alabama Hosiery Mills, Decatur, and Lengel-Fenell Co., Anniston, both full fashioned hosiery mills; also reported, construct 8 mills in Alabama.

Ala., Mobile—Super-Weave Rayon Co., M. C. Dennie, Pres., Gloversville, N. Y., reported, plans establishing plant for weaving rayon cloth and manufacture underwear; will probably lease building.

Ga., LaGrange—Hillside Cotton Mills, reported, closed contract with American Obermair Co., Long Island City, N. Y., for dyeing machine; manufactures duck, twills, etc.

N. C., Burlington—Perfection Hosiery Mills, Inc., reported, rebuild burned portion of half hose plant.

N. C., Mount Airy—Mount Airy Knitting Co., reported, acquired equipment Conway Knitting Mills, Inc., Oswego, N. Y.; double capacity of childrens' union suit plant.

N. C., Newton—Warlick Mfg. Co., reported, construct 100x82 ft. addition to silk and rayon novelty plant; probably install weaving machinery.

N. C., Newton—New City Mills Co., incorporated; Clarence Capp, C. M. Rowe.

S. C., Rock Hill—Rock Hill Hosiery Co., reported, plans erecting \$30,000 addition to plant; install \$200,000 equipment.

N. C., Statesville—Stimpson Hosiery Mills, Inc., chartered; Clarence Stimpson, Fred Guerrant, erect 1 story, conc. steel and brick, building, 140x75 ft.; install modern machinery; manufacture full fashioned hosiery. 4-3

N. C., Taylorsville—A. A. Whitener, Hickory, and Paul Rhodes, Lincolnton, reported, acquired Miller Mfg. Co.'s cotton mill.

S. C., Greenville—Duncan Mills, reported, having plans prepared by J. E. Sirrine & Co., Engrs., 215 S. Main St., Greenville, for brick addition to house central station air conditioning equipment for spinning room, recently acquired from Parks-Cramer Co.

S. C., Rock Hill—Cutter Mfg. Co., reported, let contract to Carolina Specialty Co., 122 Brevard Court, Southern representative of Hermas Machine Co., Hawthorne, N. J., for Hermas shearing machine; company manufactures denims, cotton rope, etc.

S. C., Vauluse—Vauluse Mills, of Graniteville Mfg. Co., Graniteville, reported, purchased oil spraying equipment from Borne, Scrymser Co., 17 Battery Place, N. Y.

Tenn., Chattanooga—Everwear Hosiery Co., lately noted leasing portion of building 739 E. Eleventh St., applied for charter; reported, acquired hosiery plant. 6-20

Texas—Robert & Co., Inc., Bona Allen Bldg., Atlanta, Ga., reported, completed survey of several Southwest and South Texas cities, including Victoria, Del Rio, Laredo, Corpus Christi and Rio Grande Valley points, for purposes of ascertaining feasibility of establishing woolen mill; survey reported made for Central Power & Light Co., San Antonio.

Va., Hopewell—Tubize Artificial Silk Co.

of America, reported, let contract to Carolina Specialty Co., Charlotte, for 14 double deck Sipp Eastwood winders.

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Fla., Miami Beach—See Land Development.

Ky., Louisville—Glenview Co., owners of private pipe line, reported, extend mains from Glenview to Lyndon, 4 miles, cost \$130,000; probably expend \$250,000 for improvements to Crescent Hill filter plant.

La., Bogalusa—W. E. Banister, Sec., Police Jury, Washington Parish, receives bids May 2 for installing water pipe. See Want Section—Bids Asked.

La., Oberlin—Village, reported, sold \$25,000 bonds, soon let contract for water works.

La., Shreveport—National Cast Iron Pipe Co., Birmingham, Ala., reported, has contract for 1000 tons of 12-in. to 20-in. pipe.

Md., Berlin—Kelly Well Co., has contract for well for water system.

Md., Hagerstown—George Beam, Engr., Abbott Bldg., Philadelphia, Pa., recommended city construct pipe line from Edgemont to Smithsburg reservoir and conculating basin at Smithsburg; cost \$135,000.

Miss., Ackerman—Town votes April 28 on \$15,000 water works bonds.

Miss., Cleveland—City let contract to Carlloss Well Co., Front and Gayoso Sts., Memphis, Tenn., for 500 gal. per minute Cook well and deep well turbine pump. 4-3

Miss., Hazlehurst—Cobb Bros. Const. Co., Hazlehurst, has contract for water works, 8, 6 and 4-in. c. i. pipe; Culley & O'Brien, Engrs., Jackson. 4-17

Md., Baltimore—John Matriociani, 229 S. Exeter St., has contract at \$21,370, for excavating trenches Elm Tree St. 4-17

Mo., Ava—City voted \$15,000 water works bonds. 4-3

Mo., Warsaw—Monie Construction Co., Chemical Bldg., St. Louis, reported, has contract for water and sewer system. 4-3

Okla., Marlow—Shuler Drilling Co., and G. C. Wyatt, have contract for pumps and wells; cost \$60,000; V. V. Long & Co., Conslt. Engrs., Colcord Bldg., Oklahoma City. 3-13

Okla., Oklahoma City—City, Charles E. Bretz, Water Supt., soon begin surveys for \$2,000,000 impounding reservoir on Wolf Creek northwest of Woodward; dam 1 mile long; reservoir impound 50,000,000,000 gal. water. 4-17

Okla., Shattuck—City, reported, plans water works; Wood Engrg. Co., Engrs., Oklahoma City.

Tenn., Bruceton—Carlloss Well Supply Co., Front and Gayoso Sts., Memphis, has contract for 3 Cook deep wells and Cook deep well turbine pumps. 3-27

Tenn., Bruceton—United States Pipe & Foundry Co., Burlington, N. J., reported, has contract for 25,000 ft. of 2 to 8-in. pipe. 3-27

Tenn., Loudon—City, J. H. Kollock, Recorder, will let contract May 21 for water and sewer.

Tex., Caldwell—City, receiving bids for improvements water works, including steam pumping plant, retaining reservoir, additional pipe; cost \$60,000; J. Rady, Conslt. Engr., Waco.

Tex., Dallas—McWane Cast Iron Pipe Co., Santa Fe Bldg., has contract for 25,000 ft. of 2-in., 20,000 ft. of 4-in. and 25,000 ft. of 6-in. c. i. pipe, Class 150 and 3500 ft. of 12-in. c. i. pipe, Class 250.

Tex., Houston—City, J. H. B. House, Water Commr., soon call for bids for drilling well on 8 acre site in connection with constructing \$428,000 water works plant on Harrisburg-Park Place. 4-3

Woodworking Plants

Ark., Helena—Van Briggie Veneer Co. started rebuilding plant, West Helena, recently burned with \$50,000 loss.

Ark., Jonesboro—M. Ratnoff Furniture Mfg. Co., care Chamber of Commerce and Industrial Committee, let contract to John Reese, Jonesboro, for furniture plant; brick, conc., built-up comp. roof, conc. and wood

floors, conc. foundation, 1 story, 60x140 ft.; private plans. 3-27

Fla., Hastings—J. C. Baisden started erecting stove plant.

Miss., Basic—Bullard & Perrin let contract to L. B. Priester & Son, 1403 12th Ave., Meridian, for excelsior plant; 1 story, 40x108 ft., corrugated iron siding and roof; private plans.

Miss., West Point—West Point Casket Co., A. H. Ingram, Mgr., rebuilding burned plant with own forces.

Mo., Cassville—Ingalls Handle Factory, Eureka Springs, Ark., move plant here; erect building.

N. C., Maxton—Hasty Veneer Co., Inc., E. E. Candler, Pres., completed plant buildings; installing veneer equipment from Coe Mfg. Co.; equipment, \$30,000. See Want Section—Machinery and Supplies. 4-10

Va., Norfolk—Wainsco Mfg. Corp., incorporated; Walter C. Fahn, 835 Brandon Ave.; furniture and building specialties.

FIRE DAMAGE

Ala., Andalusia—Straughn High School at Straughn; loss \$22,500; address Covington County School Bd.

Ala., Greenville—Rumley Bros. Packing Co.'s plant, loss \$20,000; oil warehouse occupied by Sherrill Oil Co.; Dean blacksmith building; Beeland Motor Co.'s storage warehouse.

Ark., Green Forest—Clarence O'Neal's store at Yocum, 8 mi. from Green Forest; loss \$15,000.

Ark., Paragould—Cole Hotel, 215 E. Main St., owned by Elmer Cole.

D. C., Washington—Judd & Deweller's printing plant, Eckington Pl. and Florida Ave., N. E.

Ky., Lexington—J. B. James' residence, Valley Pike near Lexington; loss \$12,000.

Ky., Madisonville—Plant, boiler room, garage and shop of Blanks Tobacco Co., A. R. Blanks, Pres.; loss \$30,000.

Ky., Wickliffe—Bethlehem Graded School on Wickliffe-Blandville road, 3 mi. from Wickliffe.

La., Shreveport—Cherry Novelty Works, Kings Highway and Queens Highway; loss \$13,500.

Md., Baltimore—Building at 303 W. Baltimore St., occupied by Lipman & Rose Cigar Co., and University Clothing Co.

Miss., Meridian—Laundry and boiler room of Kinea Daughters Tuberculosis Hospital; loss \$6,000 to \$8,000.

La., Tallulah—Cotton seed and hull house of Tallulah Oil Mill & Cotton Gln. operated by Mississippi Cotton Seed Products Co., Jackson, Miss.; loss \$60,000.

Miss., Yazoo City—Moses Wholesale Grocery Co.'s store; loss \$100,000.

Mo., Cape Girardeau—Prof. J. C. Brandt's residence, 490 N. Pacific St.; loss \$10,000.

Mo., Kansas City—Residences of Mrs. J. R. Vaughn, Robt. Campbell and O. E. Molan, all 3900 block Campbell St.; loss \$12,000.

Mo., St. James—State Federal Soldiers' Home of Missouri, O. D. Hall, Supt.; loss \$150,000.

N. C., Elkin—Blue Ridge Hunting Lodge owned by James G. Hanes, 553 Glade St., and James Weeks, Virginia Rd., both Winston-Salem; loss \$20,000.

N. C., Hendersonville—Dancing and amusement pavilion at Laurel Park Lake, owned by H. Walter Fuller; loss \$15,000.

N. C., Tarboro—Wagner Bros.' lumber building.

Okla., Cardin—Cardin Machinery & Electric Co.'s store; loss \$50,000.

Okla., Garber—George E. Falling Drilling Machine Co.'s 2 warehouses; loss \$10,000.

Okla., Heavener—O. L. Hall's building; H. Z. Ward's building; loss \$10,000.

Okla., Medford—Buildings of Long-Bell Lumber Co., B. M. Coombs, Mgr., Stewart Hardware & Implement Store and Fire National Bank.

S. C., Pelzer—Dixie Theater, owned by Pelzer Manufacturing Co.; loss \$25,000.

Tenn., Alexandria—Caplinger & Jennings' building; Curtis & Co.'s store; U. M. Davis' restaurant; J. D. Colvert Bldg., occupied by

Postoffice, S. W. Corley, J. R. Curtis, E. S. Bennett; Bethel's Drug Store; Puckett Motor Co.'s building.

Tenn., Centerville—B. N. Lunn Hotel; Farmers and Merchants Bank; Forrest Nixon Grocery Store; Logan Beasley Bldg.; P. M. Huddleston Bldg.; loss \$50,000.

Tenn., Knoxville—Imperial Foundries Co.'s plant, 218 N. Kentucky St.; loss \$15,000.

Tenn., Memphis—Memphis Stave Mfg. Co.'s plant, N. Second St.; loss \$100,000; George Wunderlich, St. Louis, Mo.; Albert Wunderlich, Luxora, Ark., and W. C. Wunderlich, 1901 Snowden St., Memphis, owners.

Tex., Dalhart—Grand Hotel owned by R. A. Cummings; loss \$10,000.

Tex., Gainesville—Building occupied by John Kemplin feed store and mill, Gaines-

ville Chicken Hatchery, Milner & Ballard produce house and others; loss \$15,000; George W. Brown, owner.

Va., Lynchburg—Metal Products Co.'s warehouse; loss \$10,000.

Va., Profit—Gale Hill, between Profit and Stony Point Rd., residence of Mrs. J. A. Cas- kie; loss \$25,000.

Va., Suffolk—E. L. Folk & Co.'s warehouse; loss \$20,000.

W. Va., Bluefield—Stanley Wingo's residence owned by J. H. Lester.

W. Va., Fairmont—W. R. Clayton's residence, Baxter.

W. Va., Sharon—Recreation building owned by Wyatt Coal Co.; loss \$10,000.

BUILDING NEWS BUILDINGS PROPOSED

Association and Fraternal

Ky., Covington—Washington Lodge No. 3, I. O. O. F., razing bldg. on site for \$45,000 lodge bldg.; new structure start at once.

La., New Orleans—Young Men's Christian Assn. receives bids May 1 (extended date) at office Favrot & Livaudais, Ltd., Archts., Hibernia Bldg., for bldg., St. Charles Ave. and Lee Circle; estimators lately noted. 4-3

Miss., Columbus—Young Men's Christian Assn., F. P. Phillips, Chmn., Bldg. Comm., has completed plans for \$75,000 bldg.; fireproof, rein. conc., struct. steel, tile, brick, stone trim, built-up comp. roof; W. G. Clarkson & Co., Archts., First Natl. Bk. Bldg., Fort Worth, Tex. 2-27

W. Va., Moundsville—Ancient Free and Accepted Masons, C. S. Montgomery, Grand Master, Marshall Union Lodge, plans temple, Jefferson Ave. near Second St.; two architects submitting plans.

Bank and Office

Ga., Atlanta—Orr Estate, care Paul Miller, 1553 Brine St., S. W., selected Pringle & Smith, Norris Bldg., as architects for 10-story fireproof bldg., Peachtree and Pine Sts., to replace Doctors Bldg., lately noted burned at \$500,000 loss; rein. conc. and struct. steel, brick and tile, stone trim, built-up roof.

La., New Orleans—Robt. Maestri, Maritime Bldg., erect \$18,000 addition to office bldg., 8201 Oak St.; brick, 2 stories; comp. roof; Jones, Roessle & Olschner, Archts., Maison Blanche Bldg.

Mo., Kansas City—Fidelity National Bank & Trust Co., W. R. Snodgrass, Mgr., New Business Dept., advises Bd. of Directors authorized Building Comm. to proceed with plans for erection of 32-story bank and office bldg., Ninth and Walnut Sts., after plans by Holt, Price & Barnes, Archts., Telephone Bldg.; probably 32 stories. 9-19

Mo., Rolla—National Bank, John Barnitz, Pres., erect \$100,000 bank and hotel bldg. after plans by Johnson & Maack, Chemical Bldg. St. Louis; brick, 4 stories and basement, 100x150 ft., marble, tile and terrazzo work, steam heat; 60 rooms. 10-10

Tenn., Chattanooga—City Water Co., A. F. Porzellus, Supt., expend \$30,000 to remodel bldg., Tenth and Lindsay Sts., for offices; reported, plans by architects of American Waterworks & Electric Co., 50 Broad St., New York.

Tex., Dallas—Dallas Gas Co., 2016 Jackson St., plans \$800,000 office bldg.; 10 stories and basement, steel frame, granite base, brick above; Lang & Witcheil, Archts., Amer. Exch. Bk. Bldg.

Tex., Fort Worth—Texas Pacific Coal & Oil Co., Ft. Worth Natl. Bk. Bldg., add 3 floors to office bldg., Camp Bowie Blvd.; brick and stone; Wyatt C. Hedrick, nc. Archt., 1005 First Natl. Bk. Bldg.

Tex., Kenedy—Central Power & Light Co. receives bids April 26 at office J. R. McCoy to alter and erect addition to office bldg.; conc. foundation, brick, 1 story, metal lath and plaster, pitch and gravel and Mission tile roof; John M. Marriott, Archt., all Frost Natl. Bk. Bldg., San Antonio.

Va., Richmond—State Dept. of Motor Vehicles remodel old Planters National Bank Bldg., 12th and Main Sts., for quarters; \$10,000; drawing plans.

Churches

La., Baton Rouge—Istrouma Baptist Church, Rev. M. B. Buckley, Pastor, Istrouma Heights, plans \$35,000 to \$40,000 bldg.; plans not selected.

La., Baton Rouge—St. Agnes Church, Rev. Edw. Rombouts, Pastor, 929 St. Maximilian St., erect \$10,000 parish house, 929 St. Maximilian St.; frame, 2 stories and basement, 34x60 ft., asbestos shingle roof; Lewis A. Gross, Archt., New Raymond Bldg.; completing plans.

Mo., St. Louis—Roman Catholic Church of the Resurrection, Rev. Geo. Dreher, Pastor, erect fireproof church and school, Hydraulic St. near Meramec St.; brick and rein. conc., 2 stories and basement, 87x141 ft.; Henry P. Hess, Archt., Ambassador Bldg.; bids in.

N. C., Charlotte—Enderley Park Baptist Church erect \$15,000 bldg., Enderley Park and Tuckasee Rds.; work start in few days.

N. C., Greensboro—Bethel Methodist Church, Battleground Ave., Thos. C. Hoyle, Chmn., Bldg. Comm., erect \$10,000 bldg. to replace burned structure; brick veneer; seat 250; 12 classrooms; probably let contract in about 1 week.

Tenn., Knoxville—Whittle Springs M. E. Church, Broadway and Faber St., W. L. Derieux, Chmn., Bldg. Comm., Whittle Springs Rd., erect \$40,000 brick and stone bldg., Fairmont Blvd.

Tenn., Knoxville—Emerald Ave. M. E. Church, South, Emerald and Central Aves., open bids in about 3 weeks for \$40,000 brick bldg.; 72x120 ft., wood floors, brick and conc. foundation; Albert E. Greidig, Archt., Mercantile Bldg., Address Rev. A. M. Stone, Pastor, 129 E. Emerald Ave. See Want Section—Building Material and Equipment. 4-10

Tex., Crane City—Baptist Church, Methodist Church and Church of Christ each plan building.

Tex., Cuero—St. Michaels R. C. Church has low bid at \$44,950 from Falbo & Guido Construction Co., San Antonio, for bldg.; F. B. Gaenslen, Archt., Builders Exch. Bldg., San Antonio. 4-3

Tex., Gonzales—First Primitive Baptist Church opens bids Apr. 28 for \$10,000 bldg.; face brick, conc. and frame, 1 story, 40x70 ft., pine, cement and tile floors, to's roof; Will N. Noonan Co., Archt., Builders Exch. Bldg., San Antonio. See Want Section—Building Material and Equipment.

Tex., Houston—First Manchester Baptist Church has permit for \$10,000 bldg., 9301 Manchester St.

City and County

Ala., Scottsboro—City having plans drawn by E. L. Love, Huntsville, for \$10,000 to \$12,000 city hall; 2 stories; site 33x90 ft.

Ark., DeQueen—Sevier County, J. C. Arnold, County Judge, erect \$95,000 courthouse and \$45,000 jail; bond issue approved; structures brick, stone and conc., 3 stories and basement and brick and conc., 2 stories; Will, Seibert & Halsey, Archts., Texarkana Natl. Bk. Bldg., Texarkana, Ark.-Tex.

La., Amite—Tangipahoa Police Jury did not call election on \$75,000 jail bonds. 3-6

La., Hahnville—St. Charles Parish Police Jury may erect jail.

La., Many—Sabine Parish Police Jury votes May 20 on tax levy to erect jail.

La., Monroe—City, P. A. Poag, Sec. Treas., rejected bids for 4 brick bath houses and concession stand combined, Salt Water Natatorium; Clarence W. King, Architects, Bernhardt Bldg.

Md., Hyattsville—Prince George County Grand Jury, Upper Marlboro, recommended erection of bldg. to house Police Court, offices, jail sub-station.

Miss., Meridian—Lauderdale County Bd. of Supvrs. receives bids until May 1 for bldg. at county home.

Mo., Columbia—City Council, W. J. Hetzler, Mayor, having tentative plans drawn by Eckel & Aldrich, Corby-Forsee Bldg., St. Joseph, and H. S. Hill, Columbia, for city hall. 6-13

Mo., St. Louis—Board of Public Service, O. D. Tilley, Sec., having plans drawn to remodel warehouse for community bldg., Wyoming and Utah Sts.; \$50,000; F. A. Updegraff, Archt., Municipal Courts Bldg.; bids about July; also plans \$100,000 bathhouse, Jefferson and Adams Sts.; brick, 2 stories; plans by Mr. Updegraff.

Tex., Ballinger—City, H. W. McCarger, Mayor, opens bids April 30 for fireproof city hall and fire station; \$33,000, masonry and conc., 2 stories, 50x90 ft., conc. and hardwood floors, rein. conc. foundation, tar and gravel roof; furnishings, equipment, etc.; \$5,000; Paul G. Silber & Co., Archts., Bedell Bldg.; Matthews & Kenan, Engrs., Smith-Young Tower, both San Antonio. 4-3

Tex., Bastrop—City Council erect 40x50-ft. brick fire station.

Tex., Taft—City voted \$30,000 municipal bldg. bonds.

Dwellings

Ark., Camden—F. A. Laney erect \$20,000 Spanish type residence; brick veneer and stone, 2 stories, 10 rooms, hardwood floors, tile baths, tile or comp. roof; Thos. Harding, Archt., New Donaghey Bldg., Little Rock.

Ark., Little Rock—Cole Building Co., K. E. N. Cole, Pres., 4316 S. Lookout St., plans 100 dwellings, Normandy; plans to complete 12 within 60 days.

D. C., Washington—C. P. Mayo, Inc., has permit for 2 brick dwellings, 1406-10 Thirtieth St., N. W.; 3 stories; \$10,000.

D. C., Washington—Chas. M. Wallingsford, 1010 Vermont Ave., N. W., has permit for 8 brick dwellings, 1311-39 Shepherd St., N. E.; 2 stories; \$45,000.

D. C., Washington—Alfred H. Bellman has permit for 2 frame dwellings, 3900-06 Twentieth St., N. E.; 2 stories; \$10,000.

D. C., Washington—LaSalle Park Corp. has permit for 2 dwellings, 4308-12 Nineteenth St., N. E.; brick and tile, 2 stories; \$14,000.

D. C., Washington—J. B. Tiffey, 419 Oglethorpe St., N. Y., has permit for 4 brick and tile dwellings, 1310-16 Webster St., N. E.; 2 stories; \$27,000.

D. C., Washington—McKendrie & Ryan have permit for \$10,000 dwelling, 3225 Military Rd.; brick, 2 stories.

D. C., Washington—M. B. Skinner, 1350 Kennedy St., N. W., erect residence, 4763 Indian Lane, N. W., after plans by G. E. MacNell, Archt., 1119 17th St., N. W.

D. C., Washington—Fred N. Oliver, Mills Bldg., erect residence, 5521 Broad Branch Rd., N. W.; John W. Kearney, Archt., 1417 K St., N. W.

Fla., Lake Wales—Mrs. W. H. Nichols, Jr., having plans drawn for residence, Mountain Lake; Marion Sims Wyeth, Archt., Wyeth Bldg., Palm Beach.

Fla., Lake Wales—Chas. A. Bucke, care Parsons & Wait, Archts., 1 Beacon St., Boston, Mass., has plans nearing completion for \$30,000 residence, Mountain Lake; hollow tile and stucco, 2 stories.

Fla., Miami Beach—John Porter, Hartford, Conn., and Miami Beach, erect \$45,000 residence, garage, servants' quarters, etc., Pine Tree Drive; rein. conc., conc. block and stucco, 2 stories; John Bullen, Archt., Exchange Bldg., Miami; plans in 6 to 8 weeks.

Fla., Miami Beach—Mrs. Eva I. Lombard erect \$10,000 residence and garage, 8311 Collins Ave.; W. F. Snyder, Contr.

Fla., Palm Beach—Otto H. Kahn, 52 Williams St., New York, having preliminary plans made by Treanor & Fatio, Archts.,

Phipps Plaza, Palm Beach, for residence, North Ocean Blvd. 2-13

Fla., Palm Beach—Volk & Maass, Archts., Plaza Bldg., drawing plans for residence for Mr. Adams.

Fla., Palm Beach—Peter Doelger having plans drawn for residence, Royal Palm Way; Marion Sims Wyeth, Archt., Wyeth Bldg.

Fla., Palm Beach—Jerome Kern, 415 Ninth St., erect residence, Jungle Rd. and South Ocean Blvd.; Addison Mizner, Archt., 337 Worth Ave.; bids in.

Fla., Palm Beach—F. F. McIntosh, Spencer, W. Va., present address Palm Beach, purchased residence, North Ocean Blvd.; add patios, landscape, etc.

Fla., Palm Beach—L. E. Cofer erect \$25,000 residence, Barton Ave., after plans by Treanor & Fatio, Archts., Phipps Plaza; bids in. 3-27

Fla., Tallahassee—Mrs. J. E. McNair remodel office bldg.; partitions, millwork, etc.; Alvin R. Moore, Archt., Central Bldg.

Ga., Atlanta—Neal Meier, 400 Fifth St., N. E., erect stucco and tile residence, Dunwoody Rd.; 1½ stories and basement, conc. foundation, hardwood and tile floors, comp. roof; Tucker & Howell, Archts., Rhodes Haverly Bldg.; plans soon ready.

Ga., Ludowici—Methodist Church erect parsonage.

Ga., Monroe—E. S. Tichnor receiving bids for brick veneer residence; hardwood and tile floors, conc. basement, tile or slate roof, steam heat; Warfield & Keeble, Archts., Nashville Tr. Bldg., Nashville, Tenn.; Pittman Construction Co., Rhodes Bldg., Atlanta, Ga., estimating. 4-3

La., Baton Rouge—Jas. J. Bailey, Secretary of State, convert residence, 850 North Blvd., for duplex; Chas. H. Charleton, Archt., Cangelosi Bldg.; preliminary plans.

La., New Orleans—B. A. Russ, Designer, 4 Paladin Place, about ready for sub-bids on 1 brick veneer and 1 stucco dwelling, Metairie.

La., Shreveport—Mrs. Ellie Wiener, 628 Stoner Ave., receives bids until April 25 for brick residence, Fairfield Ave. 2 stories; built-in features; Jones, Roessle, Olschner & Wiener, Archts., Ardis Bldg.; following contractors estimating: Garson Bros., Majestic Bldg.; K. O. Wilson, Slatery Bldg.; Ashton-Glassell Co., Inc., 306 Travis St.; H. & B. Construction Co., Ricou-Brewster Bldg.; Gilman McConnell, Ricou-Brewster Bldg., all Shreveport; W. P. Berry, Lufkin, Tex. 2-13

Miss., Leland—Mike Kazan considers erecting several dwellings.

Miss., Leland—C. O. Dean erect brick or frame residence; \$20,000, 2 stories and basement, 41x56 ft.; Claude H. Lindsley, Archt., Lamar Bldg., Jackson.

Mo., Jefferson City—Jake Allen erect \$10,000 residence; hollow tile, rough brick and shingle, 2 stories, 29x29 ft., oak floors, asphalt shingle roof, hot air heat; H. S. Bill, Archt., Columbia; bids April 30.

Mo., St. Louis—Arhen Realty Co., care Julius E. Tarling, Archt., 2806 N. Grand Blvd., erect 2 brick dwellings, Bel Nor; 2 stories and basement, 34x24 ft. and 30x30 ft.

Mo., St. Louis—Schuermann Building & Realty Co., Wellston, erect 4 brick dwellings, Velda Village; 26x38 ft.; also 16 on Normandy Drive; 26x32 ft. and 26x38 ft.; total \$41,000.

N. C., Charlotte—Frank F. Jones, Independence Bldg., erect \$10,000 brick veneer residence, Sherwood Ave.; 8 rooms.

N. C., Charlotte—W. Nivens, 901 Mt. Vernon Ave., erect \$10,000 residence, Stamford Place; brick veneer, 2 stories.

N. C., Charlotte—C. G. Fleetwood, Johnston Bldg., has permit for \$10,000 residence, 121 Stanford Place; brick veneer, 2 stories.

N. C., Charlotte—R. C. Hicks, 5 S. Mint St., has permit for \$10,000 residence, 300 Caswell Rd., North; brick veneer, 2 stories. Okla., Oklahoma City—E. K. McKissick, 215 W. 22nd St., plans residence, 10-acre tract near 63rd St. and Lincoln Blvd.

Tenn., Memphis—Dr. D. K. Sauls, Bank of Commerce Bldg., advises has decided not to erect residence, Hein Park subdivision. 4-10

Tex., Fort Worth—Brown Harwood, Ft. Worth Natl. Bk. Bldg., having final plans drawn for cut stone residence, Forest Highland; 2 stories and basement, oak floors, 2 tile baths; cut stone already secured; Ervin & Godwin, Archts., Dan Waggoner Bldg.

Tex., Houston—Roy Corbin has permit for 2 duplexes, 2413 and 2502 Brun St.; brick veneer, 10 rooms.

Tex., Houston—Miss Willie May Mullins care San Jacinto Trust Co., erect residence, Wheeler St., Feldman Court.

Tex., Houston—S. R. Bertron, Jr., Pres.-Gen. Mgr., Houston Lighting & Power Co., erect residence, Pine Valley Court, River Oaks.

Government and State

Ala., Sheffield—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids May 20 for post office.

D. C., Washington—Treasury Dept. advises plans for \$6,900,000 Archives Bldg. not advanced sufficiently to give any definite information regarding project. 12-12

D. C., Washington—District Commrs., Dist. Bldg., have laundry machinery bid at \$26,980 from American Laundry Machinery Co., 989 Sixth Ave., New York.

N. C., Lenoir—Additional contractors estimating on post office, bids May 6 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.: Algernon Blair, Samford Bros., Inc., 301 Washington Ave., both Montgomery, Ala.; Grahm Construction Co., Red Rock Bldg., Atlanta, Ga.; Fanning & Sweeney, Jefferson Bldg., Greensboro, N. C.; John M. Geary Co., Box 1253, Asheville, N. C.; J. A. Jones Construction Co., Commercial Bank Bldg.; W. E. Rowan, Builders Bldg.; Harrison-Wright Co., 4 W. Third St., all Charlotte, N. C.; E. E. Garber, Bethlehem, Pa.; J. S. Sterns, Monroe, N. C.; Ward & Ward, Peoples Exch. Bldg., Charleston, W. Va.; Chas. Weitz's Sons, 713 Mulberry St., Des Moines, Iowa; North-Eastern Construction Co., Nissen Bldg., Winston-Salem, N. C.; Brown-Harry Co., 237 E. Main St., Gastonia, N. C.; Elliott Building Co., Inc., Hickory, N. C.; L. McLeod, 1701 Colley Ave., Norfolk, Va.; Fred Wright Co., 2 E. Lexington St., Baltimore, Md.; Little Construction Co., Inc., Builders Bldg.; Joe B. Martin, 1708 E. Fourth St.; J. J. McDartt Co., Builders Bldg., all Charlotte, N. C.; C. A. Morrison & Son, Shelby, N. C.; L. S. Bradshaw, Salisbury, N. C.; De Vault & Deitrick, nc., Massillon Rd., Canton, O.; Jos. Grant, 13 Alpine St., Worcester, Mass.; Ring Construction Co., 95 S. 11th St., Minneapolis, Minn.; Fayette Construction Co., 500 W. Short St., Lexington, Ky.; Castor & Castor, Brooklyn, N. Y.; Hiram Lloyd Building & Construction Co., Synd. Tr. Bldg., St. Louis, Mo.; U. A. Underwood Co., Murchison Bk. Bldg., Wilmington, N. C. 4-10

Tex., Randolph Field, Schertz—Constructing Quartermaster, Capt. A. W. Parker, receives bids May 7 for sewage disposal plant, Randolph Field. 1-16

Hospitals, Sanitariums, Etc.

Ala., Gadsden—Missionary Servants of Most Blessed Trinity, operating Holy Name of Jesus Hospital, receives bids May 12 for fireproof Colonial hospital; \$750,000, rein. conc., struct. steel, brick and tile, comp. roof, 6 stories, tower, basement and sub-basement, 130x94 ft. with two 39x35-ft. wings, terra cotta and Alabama limestone; Schmidt, Garden & Erikson, Archts., 104 S. Michigan Ave., Chicago, Ill.; J. P. Burk., Resident Engr., Box 78, Gadsden; following contractors estimating: Grahm Construction Co., Red Rock Bldg.; J. S. McCauley Co., Bona Allen Bldg.; Capital Construction Co., Standard Bldg.; National Construction Co., Inc., Glenn Bldg., all Atlanta, Ga.; John M. Geary Co., Arcade Bldg., Asheville, N. C.; Frost Construction Co., Shepherd Bldg., Montgomery, Ala.; O. M. Gwin Construction Co., Union Indemnity Bldg., New Orleans, La.; Murphy Pound, Columbus, Ga.; Batson-Cook Co., West Point, Ga.; Smallman Construction Co., 1109 Fifth Ave.; A. J. Honeycutt Co., Martin Bldg.; Day & Sachs, 2400 Fifth Ave.; Holley Construction Co., 730 19th St.; Foster & Creighton Co., Protective Life Bldg., all Birmingham, Ala.; J. A. Jones Construction Co., Commercial Bank Bldg.; Southeastern Construction Co., 210 W. Second St., both Charlotte, N. C.; S. & W. Construction Co., Shrine Bldg., Memphis, Tenn.; Hutter Construction Co., Fond du Lac, Wis.; Claussen-Lawrence Construction Co., Augusta, Ga.; Holmboe Construction Co., Oklahoma City. 4-10

D. C., Washington—Chairman of Gray Ladies, care Constructing Quartermaster, Army Medical Center, receives bids in triplicate until May 8 for chapel, including utilities, at Army Medical Center; limestone and granite; marble floor; plans from above office. 4-4-29

D. C., Washington—District Commn., Dist. Bldg., A. L. Harris, Municipal Archt., plans tuberculosis hospital for children; site not purchased; House of Representatives passed bill to increase amount already authorized from \$500,000 to \$625,000.

S. C. Anderson—Anderson County Medical Assn. interested in establishment of tuberculosis sanatorium to serve Pickens, Oconee and Anderson counties.

S. C. Charleston—Roper Hospital received bids April 24 for addition; Lockwood Greene Engineers, Inc., Archts., 9 W. 3rd St., Charlotte, N. C. 11-28

Hotels and Apartments

Fla., Bellair, Clearwater—Hotel Bellview-Biltmore erect addition and remodel hotel; plans include brokers office, beauty parlor, postoffice, beach pavilion and club rooms; Theodore H. Skinner, Archt., Clearwater.

Fla., Fort Lauderdale—W. G. Bosworth remodel Maryland Hotel on S. Andrews Ave.; 3 stories, Spanish architecture.

Ga., Atlanta—Baker Hotel, Inc., 1400 Commerce St., Dallas, Tex., reported, erect \$5,000,000, 23-story, 756-room hotel; company advises: "Have no definite plans for Atlanta at this time." 10-24

Ga., Atlanta—Following mechanical contractors estimating on \$2,500,000, 650-room Louis Dinkler Hotel for Dinkler Hotel Co., Inc., bids April 28: Plumbing and heating—Seckinger Bros., 180 Forsyth St., S. W.; Farrell Heating & Plumbing Co., 248 Ivy St., N. E., both Atlanta; W. C. Burns, Maysville; J. A. Haley & Son, Charlotte, N. C.; heating—Wm. A. Manning, 353 W. Peachtree St., N. E., Atlanta; electric—Walter Electric Co., Bona Allen Bldg.; Courson & Hitt; Electric Construction Co., all Atlanta; 19 stories and basement, 193x101 ft., struc. steel, rein. conc., brick, hollow tile, limestone trim, terrazzo, marble and maple floors, 8-story, 100x125 ft., garage in rear; G. Lloyd Preacher & Co., Inc., Archts., Mortgage Guarantee Bldg.; Thompson, Holmes & Converse, Asso. Archts., 101 Park Ave., New York. 4-17

Mo., St. Louis—Paramount Construction Co., Thos. J. Potashnick, Sec., 18 N. Eighth St., erect \$100,000, 3-story, brick 24-apartment, Waterman Ave.; Oliver J. Popp, Archt., Arcade Bldg.; ready for bids.

S. C., Darlington—J. E. Phillips erect 2- and 4-story, 50x150 ft., fireproof hotel and business building, Main St. and Public Square, to replace Darlington Hotel recently burned. See Want Section—Building Material and Equipment. 4-10

Tenn., Old Hickory—J. W. Bennett and C. W. Underwood plan 3-story, brick, 50-room hotel addition.

Tex., Devine—Chamber of Commerce promoting erection \$30,000 hotel.

Tex., Harlingen—J. J. Burke, owner of Reese-Wil-Mong Hotel, reported, erect 15-story, tile and brick hotel.

Tex., McAllen—M. R. Nelson, Contr., and associates plan \$375,000, 11-story, 157-room hotel; rein. conc., brick, tile, Spanish type; Harvey P. Smith, Archt., Natl. Bk. of Commerce Bldg., San Antonio.

Va., Richmond—Davis Brothers, Contrs., Builders' Exchange; Samuel R. Carter, Travelers' Bldg., and others promoting erection Capitol Hotel, Capitol Square, Bank and 11th Sts.; \$608,000 including site, building and equipment; 8 stories and basement, 177½x42 ft., steel, brick, limestone, terra cotta, fireproof; shop and offices on ground floor; plans completed by Marcellus E. Wright, Am. Natl. Bk. Bldg.; soon call for bids.

Miscellaneous

Ark., Fort Smith—Kelley Trust Co., Harry E. Kelley, Pres., 13 N. Seventh St., erect chapel, caretaker's residence and shop in connection with development, Bonneville Park Cemetery; Harry E. Kelley, Constr. Engr. and Landscape Archt.

Fla., Howey-in-the-Hills—Club Valencia, Miss Margaret Hoover; Miss Kerney Spencer, Evanston, Ill., and others, incorporated; plans \$500,000 clubhouse on shores of Lake Harris; Spanish type.

Fla., Jacksonville—Parental Home erect \$15,000, 2-story, brick dormitory; Jefferson D. Powell, Archt., Professional Bldg.; bids in.

Fla., Miami Beach—Wheeler's Fish Grill, E. P. Wheeler, Mgr., Biscayne St., erect \$25,000, restaurant building, Fifth St. and Alton Road; 2 stories and roof garden; B. Kingston Hall, Archt., 125 Sixth St.

La., New Orleans—Sisters of Holy Family, 2428 Gov. Nichols St., ready for bids about May 1 for \$275,000, 3-story, 257x200 ft., brick, struc. steel and iron, limestone trim, fireproof Home for Aged, 1900 Lafreniere St.; 2 side wings 2 stories; Theard & Matthews, Archts., Balter Bldg.

Mo., White House, P. O. Kimmiswick—Laymen's Retreat League, Geo. L. Dyer, Chmn., LaSalle Bldg., St. Louis, having plans prepared by O'Meara & Hill, Arcade

Bldg., St. Louis, for \$75,000, brick addition to dormitory.

Mo., St. Louis—St. Louis Women's Club, Mrs. Pearl Merrill, Sec., 4600 Lindell Blvd., having sketches drawn by Wm. B. Ittner, Inc., Bd. of Education Bldg., for alterations and addition to 2-story, brick club building; \$70,000.

N. C., Buxton—Harry Lawrence will supervise work on \$40,000, 96x66 ft. log sabin clubhouse on 800-acre site near Buxton for Phipps interests; hot water heat, electric refrigeration, 5 baths; work already begun on excavation and diking of number of fresh water ponds for ducks and geese.

Tex., Corpus Christi—W. W. Peltier and associates, reported, interested in establishment of \$1,000,000 amusement park and recreational center in North Beach.

Tex., Port Neches—Lions Club erect rustic type clubhouse; Livesay & Wiedemann, Archts., San Jacinto Life Bldg., Beaumont.

W. Va., Bluefield—Bluefield Country Club start work in about 30 days on \$10,000 swimming pool; 35x95 ft., conc.; Alex Mahood, Archt., L. C. Bldg.

Railway Stations, Sheds, Etc.

Md., Baltimore—Baltimore & Ohio R. R., L. P. Kimball, Engr., of Bldgs., received bids April 25 for 2-story brick and steel produce and express terminal, Camden and Howard Sts.; sheds extending about 2½ blocks, number tracks and conc. driveways. 1-2

N. C., Lexington—Southern Railway Co., G. L. Sittin, Ch. Engr., Lines East, M. W. & S., Charlotte, erect rein. conc., struc. steel and orick freight station; bids in. 10-17

Schools

Ala., Dadeville—Bd. of Education, A. V. Meigs, Supt., receives bids May 13 for \$25,000, 8-room elementary school; stucco over brick, steam heat, auditorium to seat 600 people. See Want Section—Building Material and Equipment. 4-17

Ala., Mobile—Mobile County Bd. of School Comms., W. C. Griggs, Supt., receives bids May 7 for \$175,000 gymnasium and swimming pool at Murphy High School; 1-story and basement, brick, stone trim, built-up roof; plans from Warren, Knight & Davis, Archts., Merchants Natl. Bk. Bldg.; Chandler C. Yonge, Asso. Archt. 4-10

Ark., Cecil—School Bd., Charles G. Andrews, Sec., receives bids May 13 for \$12,000, 1-story, brick veneer school; separate bids on building, plumbing, heating, wiring. 4-17

Ark., Cotton Plant—Cotton Plant Special School Dist., J. W. Hill, Pres. Bd. of Directors, soon have plans completed for \$30,000, 1-story, brick veneer school annex.

Ark., Forrest City—Forrest City School Dist. Trustees erect \$45,000, 2-story, 13-room and auditorium jr. high school; comp. roof, wood floors; Wittenberg & Delony, Archts., Home Insurance Bldg., Little Rock.

Ark., Pine Bluff—Arkansas-Haygood Industrial Institute, Pine Bluff, and Philander Smith College, Little Rock, plan merging; considering \$400,000 improvements.

D. C., Washington—National Radio Institute, 1535 U St., N. W., erect second story, brick and terra cotta addition to building; \$18,000.

D. C., Washington—District Commrs., Hon. P. L. Dougherty, Engr. Dept., Room 427 Dist. Bldg., erect \$500,000, 3-story brick Kingsman Jr. High School; A. L. Harris, Municipal Archt., Dist. Bldg.; bids in. 1-2

Ga., Hamilton—Bd. of Education, C. Norman Cramer, Supt., erect \$40,000, 1-story and basement, 146x123 ft., 10-classroom and auditorium, brick veneer school; comp. roof, hardwood floors, steam heat; Daniell & Beutell, Archts., Ga. Savings Bk. Bldg., Atlanta; bids in. 4-17

Ky., Blandville—Ballard County Bd. of Education, V. W. Wallis, Supt., Wickliffe, receives bids May 1 for school at Blandville, addition to Barlow School, addition to Bandana School, complete Kevill and LaCenter schools, repairs to school at Wickliffe.

Ky., Louisville—Benefit Horse Show Comm., Mrs. Clifton Rhodes, Chmn., 2121 Walnut Place, sponsoring erection of \$300,000 school for crippled children.

La., Bastrop—Morehouse Parish School Bd. receives bids May 15 for \$125,000, 2-story, rein. conc., brick, stone trim addition to Bastrop High School; plans from J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg., Monroe. 3-20

La., Baton Rouge—State School for Blind, A. J. Caldwell, Supt., receives bids May 8 for 2-story, brick school including adminis-

tration offices and auditorium to consist of 2 wings, one 56x88 ft. and other 44x28 ft.; 1-story laundry, 29x43 ft.; 1-story boy's shop, 65x28 ft.; 1-story hospital, 55x40 ft.; brick, slate roofs, composition docks, wood floors, steam heat; plans from Favrot & Livadaulis, Archts., Hibernia Bk. Bldg., New Orleans. 2-20

La., Hosston—Caddo Parish School Bd., E. Weldon Jnes, Supt., Shreveport, receives bids May 1 for \$100,000, 2-story, brick, rein. conc., stone trim school; comp. roof; plans from Edw. F. Neild, Archt., City Bk. Bldg., Shreveport. 4-3

La., Jackson—East Feliciana Parish School Bd., E. L. Dunn, Pres., Clinton, ready for bids about May 1 for \$40,000 brick high school; built-up comp. roof; Herman J. Duncan, Archt., 120 Murray St., Alexandria. 4-17

La., Mt. Hermon—Washington Parish School Bd., D. H. Stringfield, Supt., plans high school at Mt. Hermon; election May 20 on \$15,000 bonds. 4-17

La., Rayville—School Dist. No. 18, of Richland Parish, votes May 13 on \$225,000 bonds for new schools and improvements to present buildings; J. A. Ball, Pres., School Bd.

La., Shreveport—Caddo Parish School Bd., E. Weldon Jones, Supt., receives bids May 21 for \$75,000, 2-story, brick, 8-classroom and auditorium addition to Barrett School; built-up comp. roof; plans from Edw. F. Neild, Archt., City Bk. Bldg. 4-17

La., Vivian—Vivian School Dist. voted \$150,000 bonds for 12-room auditorium and gymnasium to school; E. Weldon Jones, Supt., Caddo Parish School Bd., Shreveport. 3-13

Md., Hamilton, Baltimore—Bd. of Public Improvement Comsn., H. J. Leimbach, Supvg. Engr., having plans prepared by Wm. Emmart, Union Trust Bldg., for \$472,103 North-eastern Jr. High School, Bayonne and Carter Aves.; plans to call for bids this summer; auditorium to seat 1000 people.

Md., Wheaton—Eastern Atlantic Synods of United Lutheran Church, Rev. Dr. J. Henry Harms, Pres., Bd. of Trustees, Chestnut above 21st St., Philadelphia, establish college for women to be known as Grace College on 189-acre tract on Washington-Gettysburg Highway near District of Columbia; plans have been drawn for group of buildings, including administration hall, with library and auditorium, dining hall, dormitories and gymnasium; Georgian architecture; Carl M. Distler, American Bldg., Baltimore, Chmn., and E. Clarence Miller, 1508 Walnut St., Philadelphia, Treas., Founders Comm., seeking \$1,600,000 fund; selected Miss Jessie Truman, Norwalk, Conn., as dean; Col. P. M. Anderson, Archt., Investment Bldg., Washington, D. C. 6-13

Miss., Duncan—Bd. of School Trustees receives bids May 9 for \$50,000, 1-story, 216x54 ft. brick school and auditorium; 10 classrooms and auditorium to seat 400 people; built-up comp. roof, steam heat; plans from Hull & Malvaney, Archts., Merchants Bank Bldg., Jackson. 4-3

Miss., Liberty—East Fork Consolidated School Dist. votes May 17 on \$9000 bonds for school building; address Amite County Bd. of Supervisors.

Miss., McHenry—McHenry Consolidated School Dist. voted \$15,000 bonds for 1-story, brick, fireproof school; soon begin work.

Miss., Ripley—Bd. of Trustees, Pine Grove Consolidated School Dist., receives bids May 1 at office Tippah County Supt. of Education for school buildings; brick.

Mo., Clayton, St. Louis—School Bd., John L. Bracken, Supt., plans to call for bids in June on 12-classroom school opposite high school at 7500 Maryland Ave.; Wm. B. Ittner, Inc., Archt., Bd. of Education Bldg. 4-17

Mo., Hickman Mills—Bd. of Education, Geo. S. Lorimer, soon ready for bids for \$90,000, 2-story, brick high school; Owen, Saylor & Paysom, Archts., Interstate Bldg., Kansas City. 2-27

Mo., Joplin—Bd. of Education, Roy Breznale, Sec., ready for bids in May on \$90,000, 2-story Emerson School; Felt, Dunham & Kreihn, Archts., Balcony Bldg., Kansas City.

Mo., Maryville—Bd. of Education, Geo. P. Wright, Sec., having plans prepared by Felt, Dunham & Kreihn, 300 E. 47th St., Kansas City, for \$110,000, 2-story, brick elementary school.

Mo., Moberly—Bd. of Education, B. F. Self, Sec., received bids April 25 for Junior College and Senior High School; \$260,000; 2 stories, brick; Ludwig Abt, Archt., 114½ N. Williams St. 4-17

Mo., Springfield—Bd. of Education erect senior high school gymnasium.

Mo., Springfield—Bd. of Education, L. D. Rosenbauer, ready for bids after May 1 on first unit of Weaver Grade School; \$96,000; Heckenlively & Marks, Archts., Landers Bldg.; \$96,000 Phelps Grade School; Hawkins & Nichols, Archts., McDaniel Bldg.; \$82,000 Bailey Grade School; Heckenlively & Marks, Archts.; all 2 stories, brick; also erect \$45,000, 2-story brick Fullbright Grade School; Geo. F. Reed, Archt., Woodruff Bldg.; bids in; Wm. B. Ittner, Inc., Asso. Archt., Bd. of Education Bldg., St. Louis. 4-10

Mo., St. Joseph—Bd. of Education, A. L. Loving, Sec., ready for bids in May or June for Central High School, 26th and Edmund Sts.; \$600,000, 2 and 3 stories and basement, 258x263 ft., rein. conc., brick and stone; W. E. Gillham, Archt., Interstate Bldg., Kansas City; Wm. B. Ittner, Inc., Asso. Archt., Bd. of Education Bldg., St. Louis. 8-8-29

Mo., St. Louis — Ritenour Consolidated School Dist. Trustees receive bids April 30 for 2-story and basement, 79x36 ft., brick and rein. conc., 4-classroom addition to Marvin School, St. Charles St. and Woodson Road; Wm. B. Ittner, Inc., Archt., Bd. of Education Bldg. 4-10

Okla., Alex.—School Bd., Earl H. Beiland, Supt., soon let contract for \$12,000, 3-classroom and gymnasium school; Haskell Pruett, Archt., 830 East 17th St., Oklahoma City.

Okla., El Reno—School Bd. ready for bids in May or June on \$30,000, 1-story, brick and conc. school; Walter T. Vahlberg, Archt., Braniff Bldg., Oklahoma City.

Okla., Sayre—School Bd. plans remodeling and erecting addition to Wilson Grade School; called election on \$32,000 bonds.

Tenn., Birchwood—Hamilton County Bd. of Education, Mrs. Harry Lacey, Chmn., Chattanooga, received bids April 25 for \$35,000, 1-story and basement, brick grammar and high school; separate bids on general contract, plumbing, heating and electric wiring; R. L. Maxwell James and Gordon L. Smith, Archts., Provident Bldg., Chattanooga. 4-3

Tenn., Chattanooga—Hamilton County Bd. of Education, Jas. A. Cash, has low at \$64,999 from Stewart Construction Co., Provident Bldg., for 2-story and basement, 120x125 ft., rein. conc., steel, brick and tile Glenwood School; stone trim, comp. roof; Clarence Jones, Archt., James Bldg. 4-17

Tenn., Chattanooga—City votes in Aug. on \$500,000 school building bonds; Jas. A. Cash, Commr.

Tenn., Martin — University of Tennessee, James J. Walker, South College, Knoxville, receives bids May 16 for Physical Education buildings at University of Tennessee Jr. College; bids on general contract, and separately for plumbing, heating and ventilating, and for electrical work; proposals on all branches of work on each building separately or on 2 buildings together; plans from Barber & McMurry, Archts., General Bldg., Knoxville. 1-30

Tenn., Moscow — Fayette County Bd. of Education, M. A. Weber, erect \$25,000, 1 or 2-story and basement, brick or brick veneer school; election May 3 on bonds.

Tex., Brackettville — Brackettville Ind. School Dist., O. L. St. John, Pres., votes April 25 on \$40,000 bonds for high school. 3-13

Tex., Carrizo Springs—Texas A. & M. College, B. D. Marburger, Engr. of Bldgs., erect buildings on 192-acre experimental farm donated to the State by Bird Cattle Co. and citizens of Winter Garden Dist.

Tex., Corpus Christi—Nueces Hotel, R. P. Love, Mgr., Chaparral St., plans \$50,000 improvements.

Tex., Matador—School Trustees, F. F. Tunnell, Clk., erect ward school; \$60,000 bonds voted; contract to be awarded about May 15. 4-3

Tex., Mercedes—Mercedes Ind. School Dist., Fred Johnson, Sec., erect high school, gymnasium and cafeteria and make other improvements; election April 22 on \$250,000 bonds; R. Newell Waters, Conslt. Archt., Weslaco. 3-20

Tex., Pampa — Pampa Ind. School Dist., Joe M. Smith, Bus. Mgr., ready for bids about May 15 for \$68,000, 2-story, 14-classroom, high school addition, \$30,000, 1-story, 6-room addition to South Ward school, 2-room addition to East Ward school, 4 room addition to West Ward school; all rein. conc., brick, stone and rein. conc.; W. R. Kaufman & Son, Archts., Box 1633. 3-27

Tex., Quanah—Bd. of Education erect 2 ward schools; \$120,000 bonds voted.

Tex., Saltillo—School Bd., G. C. Holbert, Sec., erect 10-classroom brick school; Smith & Praeger, Archts., Paris; bids in.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., receives bids April 29 for 1-story, six-room addition and remodeling brick and rein. conc. Thomas Nelson Page Jr. High School; Atlee B. & Robt. M. Ayres, Archts., Smith-Young Tower; W. E. Simpson Co., Engr., Milam Bldg.; bids May 1 for 2-story, 2-room addition to Lamar Elementary School; Glenn C. Wilson, Archt., Milam Bldg.; Lilly & Drought, Engrs., Natl. Bank Bldg.; bids May 2 for 2-story, 8-classroom addition and remodeling Hillcrest Elementary School; Kelwood Company, Archts., Travis Bldg.; Phelps & Dewees, School Archts., Gunter Bldg. 3-13

Tex., Sweetwater—Sweetwater Ind. School Dist., C. R. Simmons, Pres., School Bd., receives bids April 28 (extended date) for \$105,000, 2-story and basement, brick, tile and rein. conc., 20-room Jr. High School; \$20,000 improvements to Jr. High School; and 1-story, 3-room, brick, tile and stucco negro and Mexican ward schools, \$6000 each; plans from W. R. Griffin, Archt., Levy Bldg., following contractors estimating: H. J. Shell & Son, Box 2337, Lubbock; Christy-Dolph & Cannon, Western Reserve Life Bldg.; H. H. Myers, 1124 E. Harris St., both San Antonio; H. W. Underhill Construction Co., F. A. Mote, both Construction Industries Bldg., Dallas; Glenn G. Lamson; C. S. Oates & Son; Bal-fanz Construction Co.; H. B. Horn, all Abilene; R. F. Ball Construction Co., 806½ Taylor St., Fort Worth; Meyer & Johnston, Sweetwater; D. N. Leaverton, Lubbock and Sweetwater; J. E. Johnston Construction Co., 1000 Franklin Ave., Waco; Taylor Bros., Perkins-Snyder Bldg., Wichita Falls. 4-10

Va., Abington—Washington County Bd. of Education erect school for Malden Falls graded school.

Va., Blacksburg—Virginia Polytechnic Institute, Dr. Julian Burruss, Pres., adopted budget of \$53,092 for 6 building projects to include field laboratory for agricultural experiments, dairy products building to cost \$1000; additions to chemistry building, \$100,000; mechanical building and completion stone dormitory.

Va., Lexington—Virginia Military Institute ready for bids about May 1 for \$150,000 engineering building; Carneal, Johnston & Wright, Archts., Electric Bldg., Richmond. 4-10

Va., North Tazewell—Town votes May 10 on \$13,000 bonds for school purposes; Judge A. C. Buchanan, Tazewell Circuit Court.

Va., University — University Agricultural Experiment Station, R. H. Hurt, Blacksburg, erect laboratory building on grounds belonging to University of Virginia.

Va., University—University of Virginia, Dr. Edwin A. Alderman, Pres., plans \$2,000,000 expansion program within two years, including \$300,000 football stadium, gift of Rev. Frederick W. Scott, Rector of University; \$350,000 law building, gift of Wm. Andrews Clark, Jr., Butte, Mont.; \$200,000 nurses' home and \$150,000 heating plant addition, from State appropriation, Estate of Conrad Hubert and Estate of John B. Cobb; \$100,000 Cobb Chemical Laboratory, Estate of John B. Cobb; \$100,000 museum of art, gift of Mrs. Evelyn M. B. Tiffany, Baltimore; \$250,000 Engineering Bldg., appropriated by General Assembly.

Va., Virginia Beach—Atlantic College, Dr. Wm. Moseley Brown, Pres., soon call for bids for first unit to consist of academic building and dormitory to cost \$150,000; academic building, 50x115 ft.; dormitory, 45x90 ft.; both 3 stories and basement; foundations being laid; papers seeking charter for university being prepared; others interested include Morton H. Blumenthal, Chmn., Bd. of Trustees, 71 Broadway, New York; Thos. B. Brown, Engr., Dayton, Ohio.

W. Va., Bluefield—Bluefield Colored Institute having plans prepared by Garry & Sheffey, Bailey Bldg., for \$12,000 home for president; 8 rooms, brick.

W. Va., Bramwell—Bd. of Education having plans prepared by Garry & Sheffey, Bailey Bldg., Bluefield, for remodeling Bramwell High School.

W. Va., Elgood—Bd. of Education, East River Dist., having plans prepared by Garry & Sheffey, Bailey Bldg., Bluefield, for \$11,000, 2-classroom, auditorium and gymnasium, teachers room and library addition to Elgood High School.

W. Va., Greenbrier—Junior College for Women, Dr. French Thompson, Pres., and associates negotiating for sale of college; plan additions to buildings and equipment.

W. Va., McComas—Bd. of Education erect \$10,500, 3-classroom and gymnasium addition to McComas High School; Garry & Sheffey, Archts., Bailey Bldg., Bluefield.

W. Va., Richfield—Bd. of Education, Beaver Pond Dist., Edwin C. Wade, Supt., complete Ramsey Jr. High School; \$30,000; Garry & Sheffey, Archts., Bailey Bldg., Bluefield.

Stores

Fla., Orlando—Lerner Stores Corp., 354 Fourth Ave., New York, leased ground floor of Way Bldg. on S. Orange St. and remodel for department store.

Ga., Rome—O. C. Lam soon ready for bids for 2-story, 32x131 ft. brick store; far and gravel roof, conc. floors; Tucker & Howell, Archts., Rhodes Haverty Bldg., Atlanta.

La., Monroe—Frank Enson, 830 Jefferson St., erect 1-story, brick, 2-store building, Jackson and Mulberry Sts.

La., Opelousas—Maurice Heymann, Lafayette, receives bids April 29 for 1-story and mezzanine, rein. conc., brick, fireproof department store, Main and Union Sts.; built-up comp. roof, wood and tile floors; Wm. T. Nolan, Archt., Canal Bk. Bldg., New Orleans. 4-8

Mo., Kansas City—Baker Manufacturing Co., 1315-21 W. Eighth St., erect 2-story building, 4250 Troost Ave., to display plumbing supplies.

Mo., Springfield—M. B. Fall, 4106 Warwick Blvd., Kansas City, and Ben Franklin Hotel, Springfield, erect \$50,000, 3-story brick store and apartment; W. A. Bescke, Archt., Hutzinger Bldg., Kansas City.

Okla., Kingfisher—F. G. Buhner, Constr. Dept., J. C. Penney Co., 330 W. 34th St., New York, states that the company plans interior improvements to store at Kingfisher; has no information relative to store at Paul's Valley; recently reported to erect stores. 3-13

S. C., Charleston—S. H. Kress & Co., 247 King St., plans store, 281-83 King St.

S. C., Charleston—W. Burke Harmon, 140 Nassau St., New York, remodel building, 235 King St., for Cowperthwaite's, Inc.; also remodel building, 233 King St., for Rogers, Inc.

S. C., Charleston—M. Dumas, 220 King St., remodel building, 233 King St., for The Oriental Store.

Tenn., Cookeville — Herbert Carlen and Charles Darwin erect brick brick building on Public Square.

Tex., Austin—University Co-op. Society, Edmond C. Rather, Mgr., erect 1-story, 40x80 ft., rein. conc., brick addition to store, 2246 Guadalupe St.; built-up roof; H. F. Kuehne, Archt., Littlefield Bldg.; bids in.

Tex., Corpus Christi—A. H. Lawson erect \$30,000 building, Chaparral and Taylor Sts.

Tex., San Antonio—R. H. Hemley, care Eickenroht & Cooke, Archts., Maverick Bldg., rejected bids for 1 and 2 story, 160x60 ft., brick, tile and stucco store on Fredericksburg Road between Ashby and French Sts.; plans being revised and to be refigured by low bidders; Beretta Stiles Co., Inc., Engrs., Natl. Bk. of Commerce Bldg. 3-27

Theaters

La., Opelousas—Southern Amusement Co., Lake Charles, plans theatre on Main St.

Tex., Houston — Houston Little Theatre, Leslie Dufton, Pres., 808 Anita St., plans theatre on Main St.

W. Va., Huntington — Huntington Little Theatre Guild, Col. George S. Wallace, Pres., 742 Washington Ave., considering erecting theatre.

W. Va., Parkersburg—Smoot Amusement Co., 220 Eighth St., reported, erect theatre, Market and 8th Sts.; seat 1800 people; remodel Lincoln Theatre for store rooms.

Warehouses

D. C., Washington—Government, Col. U. S. Grant, 3rd, Public Buildings and Grounds, 1056 New Navy Bldg., plans \$1,750,000 warehouse in vicinity Navy Yards; C. A. Peters, Asst. to Col. Grant, will draw plans; date of construction not determined.

Md., Baltimore—Stewart & Co., Thomas P. Abbott, Pres., Howard and Lexington St., ready for bids in about 2 weeks for \$200,000, 2-story, steel and brick delivery warehouse and 40-car garage, 641 W. Saratoga St.; Joseph Evans Sperry, Archt., Calvert Bldg.

Mo., Ellisville—J. R. Gracyak erect 2-story and basement, 54x106 ft., brick store and feed warehouse; Wm. J. Beattie, Archt., Frisco Bldg., St. Louis.

Mo., Kansas City—Pittsburgh Plate Glass

Co., Frick Bldg., Pittsburgh, Pa., erect 300x152-ft. branch building, 13th St. and Burlington Ave.; also plans branch buildings at Knoxville, Tenn., and El Paso, Tex.

Mo., Springfield—Missouri College of Agriculture and H. C. Hensley, of State Department of Agriculture, Jefferson City, promoting

erection wool warehouse to handle product of 44 counties in the Ozarks region; to be under supervision Federal Farm Board, Washington, D. C.

Tenn., Knoxville—See Mo., Kansas City.

Tex., El Paso—See Mo., Kansas City.

BUILDING CONTRACTS AWARDED

Bank and Office

D. C., Washington — Following sub-contracts let on \$1,500,000 addition to American Security & Trust Co. bldg.: Wrecking, Sidney L. Hechinger Housewrecking Co., Sixth and C Sts., S. W.; struct. steel, Barber & Ross, 11th and G Sts., N. W.; piles, Raymond Concrete Pile Co., Barr Bldg.; Indiana Limestone Co., Colorado Bldg.; hollow metal doors, Art Metal Construction Co., Southern Bldg., all Washington; granite, George Dodds & Sons Granite Co., Xenia, Ohio; interior marble, Hilgartner Marble Co., Sharp and Ostend Sts., Baltimore, Md.; York & Sawyer, Archts., 100 E. 42nd St.; Meyer, Strong & Jones, Mech. Engrs., 101 Park Ave., both New York; George A. Fuller Co., Contr., Munsey Bldg., Washington, and New York. 3-27

D. C., Washington — Potomac Electric Power Co., 14th and C Sts., N. W., let contract to Geo. Hyman Construction Co., 1010 Vermont Ave., N. W., for \$1,500,000 office bldg., 10th and E Sts., N. W.; 9 stories surmounted by pent house, 2,205,000 cu. ft., 193 x 87 ft., brick and limestone, white granite main entrance on Tenth St.; parking space in basement; elect. demonstration dept. on second floor; Waddy B. Wood, Archt., 16 Jackson Place, N. W. 3-13

Ga., Atlanta—Industrial Life & Health Insurance Co., 135 Walton St., N. W., John N. McEachern, member, erect 6-story store and office bldg., 561 W. Peachtree St., instead of 3- or 4-story bldg. previously noted; work under way; rein. conc., brick and tile, stone trim, tile and terrazzo floors, tar and gravel roof; Frazier & Bodin, Archts., Candler Bldg.; Chas. Black, Jr., Contr., Atlanta Tr. Bldg. 11-28

Ga., Atlanta—Following sub-contracts let on \$750,000 annex to 16-story bldg., for First National Bank; Rein. steel, Kalman Steel Co., Candler Bldg.; elect. work, J. M. Clayton Co., 63 Cone St.; ventilating, Claude A. McGinnis Co., 136 Krog St.; setting exterior granite, Capital Stone Co., 214 Ferry St.; removal of vault equipment, safe deposit boxes, etc., C. C. Downs Safe & Lock Works, 143 Alabama St.; elevators, Otis Elevator Co., 39 Harris St.; marble, Georgia Marble Co., Bona Allen Bldg.; terra cotta, Atlanta Terra Cotta Co., Glenn Bldg.; tile and terrazzo work, U. S. Mosale Tile Co., Bona Allen Bldg.; millwork, Phoenix Planing Mill Co., 719 Highland Ave.; cabinet work, J. P. Womack & Sons, Lakewood Ave.; sprinkler work, Grinnell Co., 276 Marietta St.; glass and glazing, Pittsburgh Plate Glass Co., 180 Alabama St.; common brick, Chattahoochee Brick Co., Fourth Natl. Bank Bldg.; struct. steel, Froehling & Robertson, Inc., Citizens & Southern Bk. Bldg.; face brick, B. Millin Hood Brick Co., 686 Greenwood Ave.; cement, Dixie Royal Portland Cement Co. through Cromer & Thornton, Inc., 215 Decatur St.; sand and gravel, also through Cromer & Thornton, Inc.; conc. forms, Baker Form Co., Indianapolis, Ind.; exterior granite, Maine & New Hampshire Granite Corp., North Jay, Maine; struct. steel, steel stairs and misc. iron, Ingalls Iron Works Co., 720 Fourth Ave.; Magnolia cement, Southern Cement Co., American Trust Bldg., both Birmingham, Ala.; plumbing and heating, O'Pry Heating & Plumbing Co., 163 Cotton Ave., Macon, Ga., and Atlanta; foundations, Raymond Concrete Pile Co., 140 Cedar St.; steel windows, Campbell Metal Window Corp., 1 Pershing Square, both New York; vault equipment, Herring-Hall-Marvin Co., Hamilton, O.; casement windows, Crittall Casement Window Co., 10951 Fern St., Detroit, Mich.; elevator doors, fronts and cabs, Tyler Co., 3615 Superior St., Cleveland, O.; orna. bronze, bank cages, metal doors and extruded bronze, Ivan Allen Marshall Co., 40 Marietta St., Atlanta, representing Art Metal Construction Co., Jamestown, N. Y.; testing and inspection of struct. steel, Pittsburgh Testing Laboratories, 1330 Locust St., Pittsburgh, Pa.; hollow tile, Standard Brick & Tile Co., 460 Broadway, Macon; Pringle & Smith, Archts., Norris Bldg.; Barge-Thompson Co., Contr., 136 Ellis St., N. E., both Atlanta. 2-20

La., Baton Rouge—Citizens Bank & Trust Co., 1628 Main St., let contract at \$11,900

to Clifford H. King, Prescott Lane, for bank bldg., rein. conc., brick, stone trim, fireproof, 1 story, 39x72 ft.; Lewis A. Grosz, Archt., Raymond Bldg. 1-16

Mo., St. Louis—Missouri State Life Insurance Co., Broadview Hotel Bldg., and Penco Realty & Building Co., remodeling of and addition to bldg., Broadway and Olive St.; \$200,000; Humes-Deal Co., Arcade Bldg., and James H. Bright Contracting & Building Co., Arcade Bldg., contractors; Mauran, Russell & Crowell, Chemical Bldg., architects for banking rooms; G. F. A. Brueggeman, Liberty Cent. Tr. Bldg., architect for addition; Brusel & Viterbo, Struct. Engrs., Arcade Bldg. 2-13

Okla., Oklahoma City—Indian Territory Illuminating Oil Co., Commerce Exch. Bldg., let contract to Harmon & Mattison, Insurance Bldg., for \$45,000 office bldg.; Cedar-ter brick veneer, 2 stories and basement, 64x112 ft., linoleum floors, inso board, asbestos shingle roof. 3-27

Tex., Fort Worth—W. T. Waggoner install new elevators and elect. wiring in W. T. Waggoner Bldg.; Harry B. Friedman, Contr., First Natl. Bk. Bldg., wiring, Shotts Electric Co., 211 W. Eighth St., both Fort Worth; elevators and doors, Otis Elevator Co., 1820 Young St., Dallas.

Churches

Tex., Bartlett—First Baptist Church erect \$35,000 building; Moore & Hale, Contrs., Mission, present address Bartlett, Tex. See Want Section—Machinery and Supplies.

Tex., Brenham—First Baptist Church erect \$40,000 bldg.; Moore & Hale, Contrs., Mission, present address Bartlett, Tex. See Want Section—Machinery and Supplies.

Tex., Falfurrias—First Presbyterian Church erect \$20,000 bldg.; Moore & Hale, Contrs., Mission, present address Bartlett, Tex. See Want Section—Machinery and Supplies.

Tex., Marfa—El Paso Sash & Door Co., 2200 Mills St., has millwork contract for Sunday school for M. E. Church, South; steel work, El Paso Foundry & Machinery Co., 1800 E. San Antonio St.; orna. iron, Wyler Industrial Works, 714 S. Virginia St., all El Paso; painting, D. A. Flynn, Marfa; Braunton & McGhee, Archts.-Engrs., First Natl. Bank Bldg., El Paso; Cedar Rapids Construction Co., Contr., Higley Bldg., Cedar Rapids, Iowa, and P. O. Box 1422, El Paso, Tex. 4-3

Tex., Mission—First Christ Church erect \$25,000 bldg.; Moore & Hale, Contrs., Mission, present address Bartlett, Tex. See Want Section—Machinery and Supplies.

Tex., San Saba—Church of Christ, Wallace St., E. B. House, Chmn., Bldg. Comm., let contract for \$14,000 bldg. to J. C. Ray, Dallas; brick and tile, 46x66 ft., Gothic type; 5 classrooms in basement; plans by Contr. 2-20

City and County

Fla., Kendall—Dade County Bd. of Comrs., started work on convict stockade; Eugene A. Ownbey, Supt. of Constr., 820 N. W. 34th St.; Belsham, Jorgensen & Schreffler, Engrs., Calumet Bldg., all Miami. 3-27

Tex., Jacksonville—City completed excavation for \$43,000 city hall; fireproof, 2 stories, 52x79 ft., with 36x100-ft. wing, cement slab floors, with cement finish, Barrett 20-yr. bonded roof; furnishings, equipment, etc., \$10,000; S. W. Ray, Archt.; H. L. Thackwell, Engr. 4-17

W. Va., Princeton—Virginia Brick Co. has contract for 900,000 brick for \$400,000 Mercer County courthouse and jail; Alex. B. Mahood, Archt., L. C. Bldg.; Boone, Eason & Wood, Contrs., L. C. Bldg., both Bluefield. 2-20

Dwellings

D. C., Washington—Columbia Construction Co., 7019 Georgia Ave., N. W., has per-

mit for 3 dwellings, 7110-18 Ninth St., N. W.; brick, 2 stories; \$20,000.

D. C., Washington—Alfred T. Newbold, 5626 Connecticut Ave., N. W., erect 2 dwellings, 3931-33 Legation St., N. W., after plans by C. N. Norton, Archt.; stone and stucco, 2½ stories; owner builds. 4-17

D. C., Washington—W. C. & A. N. Miller, 1119 Seventeenth St., have permit for \$15,000 dwelling, 4917 Rockwood Pkwy.; brick, 3 stories; owners build.

Fla., Lantana — Harold S. Vanderbilt, Palm Beach, starting work on \$300,000 residence; Italian villa type, stucco, Quarry Key stone trim, 2 stories, 280x80 ft., wood and tile floors over conc. slabs, rein. conc. foundation, tile roof; Treanor & Fatio, Archts., Phipps Plaza; Watt & Sinclair of Florida, Inc., Contr., Box 2007, both Palm Beach. See Want Section—Building Material and Equipment. 4-17

Fla., Miami Beach—Mrs. Nelson S. Talbott, Dayton, O., erect residence, 93rd St.; John & Coulton Skinner, Archts., 404 Viscaya Ave., Coral Gables, Fla.; Wm. F. Bon-sack, Contr., 126 N. E. First St., Miami Beach.

Fla., Miami — Biscayne Associates, Inc., Columbus Hotel Arcade, remodel and enlarge dwelling, N. W. Ninth St.; 2 stories; tile terrazzo and oak floors, tile roof, conc. foundation; Wade & Oemler, Archts., Exchange Bldg., Address Owner. See Want Section—Building Material and Equipment. 4-17

Fla., Palm Beach — Fredk. Johnson, Via Bellaria, let contract to Jack Wilson, 604 S. Olive St., for \$15,000 addition to residence; Treanor & Fatio, Archts., Phipps Plaza. 2-27

Fla., Orlando—John T. Porter erect residence, 722 Alameda Ave., Edgewater Heights; Maurice Kressly, Archt., Smith Bldg.; A. B. Struble, Contr., 1615 Ridgewood Ave.

Fla., Orlando—J. M. Clayton erect \$15,000 to \$20,000 residence, Edgewater Heights; W. A. McCree, Contr., Las Vegas.

Fla., Palm Beach—Jos. Snyder let contract to J. R. Wakeman, 3 Everglades Arcade, for residence, Bethesda Lane; Howard Major, Archt., 19 Via Parigi.

Fla., Wewahitchka—John Cox erect residence near Wewahitchka; contract let.

Ga., Atlanta—Mrs. Rose K. Weinburg, 459 North Ave., N. E., erect \$10,000 residence, Paces Ferry Rd.; brick veneer, 1 story, hardwood and tile floors, Vitrolite baths; day labor.

Ga., Atlanta—M. Mack Evans, 565 Laghorn St., S. W., completed foundation for \$12,500 residence, 22 Woodcrest Ave.; brick veneer, 2 stories, 33x36 ft., oak floors, asphalt roof; E. J. Hammond, Archt., 312 Tenth St.; day labor. 4-17

La., New Orleans—John Watt remodel and enlarge residence, 1828 State St.; Moise H. Goldstein, Archt., Hibernia Bk. Bldg.; Reilly-Ruckstuhl, Inc., 423 Carondelet St., gen. contract at \$26,287.

La., New Orleans—H. J. Marchand, Contr., 2022 Audubon St., erect dwelling.

La., New Orleans—Dr. Rawley M. Penick, 12 Audubon Place, erect brick veneer and limestone trim residence and garage, Metry Club Gardens; 2 stories, 36x60 ft., orna. iron, slate roof, steam heat, oil burner; Lockett & Chachere, Archts., Balter Bldg.; finishing plans; work by sub-contract. 4-10

Md., Baltimore—Belmar Engineering Co., 459 Calvert Bldg., erecting 10 brick dwellings, Milburn Heights, after plans by Edw. C. Minor, 10 E. Pleasant St.; foundations in; \$6500 each, brick, semi-detached, 2 stories, 30x40 ft., oak and pine floors, asphalt built-up roofs; work by sub-contract. See Want Section—Building Material and Equipment. 4-10

Md., Baltimore — Sheppard Bros., Wood-lawn, have contract for \$30,000 dwelling, Tunbridge Rd.; stone, 2 stories, 40x50 ft., hardwood and linoleum floors, slate roof; Cyril H. Hebrank, Archt., Central Sav. Bk. Bldg., Baltimore; foundation in.

Md., Baltimore—Atlantic Building Co. erect 6 brick dwellings, 7506-16 Harford Rd.; 2 stories, 14x42 ft., hardwood floors, slate and comp. roof, hot water heat; \$18,000; Fredk. E. Beall, Archt., 334 St. Paul St.; owner builds.

Miss., Hollandale — Hubert Thompson let contract for brick, field stone, timber and stucco residence to W. Phelps, 1680 Jackson Ave., Memphis, Tenn.; field stone, stucco and timber, 1 story, 31x53 ft., hardwood floors, tile bath, hot water heat; Polk W. Agee, Archt., Fidelity Bk. Bldg., Memphis. 1-2

Miss., Laurel—T. G. McCallum, Sixth Ave., completed excavation for \$50,000 residence; brick, hollow tile and conc. slab, 2 stories, 71x35 ft., hardwood floors, conc. foundation, slate roof; furnishings, equipment, etc., \$10,000; Emile Well, Inc., Archt., Whitney Central Bldg., New Orleans, La.; Louis A. Gily, Contr., N. Fifth St., Laurel; sub-contracts let. 4-17

Mo., Clayton, St. Louis—Malvern Investment Co., 1003 Fullerton St., erect \$15,000 brick dwelling, 619 Moorlands Drive; 2 stories, 50x41 ft., stone foundation, slate roof, hot water heat; Nolte & Nauman, Archts., 3832 W. Pine St.; R. A. & G. Bullock, Contr., 1003 Fullerton.

Mo., Kirkwood, St. Louis—E. J. Burgard, Manchester Rd. near Woodlawn, erect \$10,000 residence, E. Essex Ave. by sub-contract; frame, 1 story and basement, 33x45 ft., hardwood floors, tile bath, slate coated shingle roof, hot water heat.

Mo., St. Louis—Arthur H. Yates, 4108 Beachwood St., erect \$10,000 brick residence, Barret St., Arbor Terrace; 1 story and basement, 38x40 ft., tile bath, hardwood floors, comp. shingle roof, hot air heat; Walter Kluttenkamper, Contr., 4110 Beachwood Ave.

Mo., St. Louis—Dr. L. G. McCutcheon, care Aegerter & Bailey, Archts., Ry. Exch. Bldg., let contract to B. J. Charleville, 114 N. Seventh St., for \$30,000 residence, Hanley Rd.; brick, 2 stories and basement, 34x43 ft., hardwood floors, copper sheet metal work. 4-10

Mo., St. Louis—R. A. & G. B. Bullock, Fullerton Bldg., erect 5 brick, stone and half-timber dwellings, 639-43 Polo Drive, Moorlands Drive, and Oakley Drive; 2½ stories and basement, 50 x 37 ft. and 29 x 32 ft.; Nolte & Nauman, Archts., 3832 W. Pine Blvd.; work by sub-contract.

Mo., St. Louis—Ogden D. Williamson, 7039 Waterman Ave., erect \$20,000 residence, 836 Roland Drive; brick, 2 stories and basement, 64 x 33 ft., hardwood floors, tile bath, slate roof, hot water heat; Geo. R. Bartling, Inc., Archt., 509 Paul Brown Bldg.; work by sub-contract.

Mo., St. Louis—Schuermann Building & Realty Co., 6203 Easton St., erect 15 brick dwellings, Normandale Ave., Velda Village; \$31,000; plans and constr. by owner.

Mo., St. Louis—S. A. Leford, 4039 Flad St., erect 2 brick dwellings, 5645-49 Rhodes St.; 1 story, 27x45 ft., asphalt shingle roofs, hot air heat; A. F. Stauder, Archt., Grand and Gravois Sts.; owner builds.

Mo., St. Louis—Wandavard Realty Co., 3452 Gravois St., erect 6 brick dwellings, 6126-44 Wanda St.; 1 story, 29x39 ft., asphalt shingle roofs, hot air heat; \$21,000; O. J. Popp, Archt., Arcade Bldg.; Reed-Nelson Construction Co., Contr., Ninth and Chestnut Sts.

Mo., University City, St. Louis—F. Bartlett, 3526 Washington St., erect \$10,000 brick residence, 7266 Princeton St.; 2 stories and basement, 28 x 32 ft., tile bath, tile roof, hardwood floors, steam heat; Schooley & Chambliss, Contrs., 6038 Delmar Blvd.

Mo., University City, St. Louis—E. L. Chambliss, 5419 Algernon St., erect \$10,000 brick residence, 7120 Princeton St.; 2 stories and basement, 28 x 32 ft., tile roof, hardwood floors, tile bath, steam heat; Schooley & Chambliss, Contr., 6038 Delmar Blvd.

Mo., University City, St. Louis—D. Stinson, 7135 Amherst Ave., erect \$12,000 residence, 7134 Stanford Ave.; brick, 2 stories and basement, 32 x 33 ft., tile bath, hardwood floors, tile roof, Vitrolite wainscot, hot water heat; Chas. R. Greene, Archt., Wainwright Bldg.; work by sub-contract.

Mo., University City, St. Louis—J. K. Sylvester, 6969 Dartmouth St., erect \$10,000 duplex, 7368 Tulane St.; 2 stories, 28x48 ft., conc. foundation, slate roof, hot water heat; owner builds.

Mo., University City, St. Louis—John Mueller, Jr., 2360 Michigan Ct., erect \$10,000 residence, 7248 Cornell St.; brick, 2 stories, 37x32.6 ft., conc. block foundation, tile roof, hot water heat; Geo. B. Willmering, Archt., 2616 Kingshighway, John M. Mueller, Sr., Contr., 2360 Michigan St.

Mo., University City, St. Louis—K. D. Kendall erect \$10,000 brick residence, 7024 Cornell St.; 2 stories, 35.8x31 ft., stone foundation, tile roof, hot water heat; Chas. J. Grady Construction Co., Archt.-Contr., both 624 Chestnut St.

Mo., University City, St. Louis—Chas. Boehne, 409 Oakley Drive, erect \$10,000 residence, 7336 Princeton St.; brick, 2 stories, 41x34 ft., conc. block foundation, hot water heat, oil or gas burner heat, tile roof; Milton Finck, Archt., Shirley Drive.

S. C., Myrtle Beach—Mrs. E. T. Cannon, Concord, N. C., started work on \$30,000 resi-

dence, Ocean Drive and Beach Place; W. H. Peeps, Archt., Latta Arcade, Charlotte, N. C.; Southern Builders, Inc., Contr., Florence, S. C. 3-20

Tex., Beaumont—Milton Feinberg let contract to R. G. Meroney, 1007 Ave. C, for 1-story frame residence; Jas. Ruskin Bailey, Archt., Public Natl. Bank Bldg., Houston.

Tex., Fort Worth—W. E. Combs, 3551 Frazer St., erect \$18,000 residence, 2308 Medford Court West, Park Hill addition; brick veneer, 2 stories and basement, 50x36 ft., tile baths and roof, oak floors, owner builds.

Tenn., Memphis—J. L. White, Jr., 10 S. Second St., erect \$10,000 brick veneer residence, 640 Rozelle St.; 2 stories, tile baths, hardwood floors, comp. roof, steam heat; R. L. Seig, Archt., First Natl. Bk. Bldg.; owner builds.

Tex., Houston—Howard F. Smith, 5002 Caroline St., remodel 2-story brick veneer residence, 5002 Caroline St., damaged by fire; \$12,000; Einar H. Stulbee, Archt., 3940 Main St.; E. B. Crawford, Contr., 2002 Mason St.

Government and State

Ark., Clarksville—Arkansas National Guard, Little Rock, let contract for \$20,000 armory to E. V. Bird, Fayetteville; brick and conc., 1½ stories, 73x94 ft.; Durward F. Kyle, Archt., National Bk. Bldg., Pine Bluff. 1-30

Ark., Mena—Arkansas National Guard, to Walter Vernon, Kennedy Bldg., Fort Little Rock, let contract for \$25,000 armory Smith; brick and stone, 1 story; Durward F. Kyle, Archt., National Bldg., Pine Bluff. 4-17

La., Alexandria—Standard Decorating Co., Gibbs Bldg., San Antonio, Tex., has contract to paint bldgs., Camp Beauregard. 1-9

Tenn., Memphis—Art Metal Construction Co., Jones and Gifford Ave., Jamestown, N. Y., has holstway door contract for \$1,500,000 remodeling and extension of custom house, courthouse and post office; National Construction Co., Inc., Contr., Glenn Bldg., Atlanta, Ga. 2-20

Va., Fortress Monroe—Constructing Quartermaster, Fort Monroe, let contract at \$234,430 to W. F. Martens, 8 Eastland Ave., Rochester, N. Y., for 17 two-family non-commissioned officers' quarters; brick and tile, 2 stories, 56x37 ft., wood floors, tile roofs, conc. foundation; also let contract at \$2201 to A. G. Plukerton & Co., 210 Essex Bldg., Norfolk, Va., for water, sanitary sewer and storm water sewer system. 4-3

Hospitals, Sanitariums, Etc.

Ky., Paducah—City Comsn. let contract to Lockwood & Gasser, 213 S. Fourth St., for contagious disease unit at Riverside Hospital; brick, stone and steel.

Hotels and Apartments

Ark., Little Rock—Big Rock Stone & Material Co., 1900 Lincoln St., has contract for concrete work and Capital Steel Co., Gazette Bldg., has contract for rein. steel for \$1,000,000, 14-story, 250-room hotel under construction for McGehee Hotel Co.; foundation and basement in; Wittenberg & Deloney, Archts., Home Insurance Bldg.; Stewart-McGehee Construction Co., Contr., Kahn Bldg. 3-20

D. C., Washington—Following sub-contracts awarded on group of apartments being erected at 39th and Cathedral Sts. for Westchester Development Corp., Tower Bldg.: Steel, Rosslyn Steel & Cement Co., 3031 K St., N. W.; cement, Fries, Beall & Sharp Co., 734 10th St., N. W.; brick, United Clay Products Co., Investment Bldg.; millwork, Barber & Ross, 11th and G Sts., N. W.; plumbing and heating, David Alsop, 801 Kentucky Ave., S. E.; excavation, footings and first floor slab in place in unit No. 1; sixth floor slab of unit No. 2 poured and starting brick work; Harvey Warwick, Archt., Ambassador Hotel Bldg.; Cafritz Construction Co., Gen. Contr., 1402 K St., N. W. 2-20

Ga., Atlanta—Cliff Williams, 250 Elliott St., N. W., erect \$50,000, 2-story and basement, brick veneer, 16-apartment, Parkway Drive and 6th St., N. E.; comp. roof, hardwood and tile floors, steam heat; owner, Archt.-Bldr.

Ga., Dalton—Dalton Hotel Co., W. C. Bowen and N. J. Smith, erect additional story to 4-story hotel; 28 rooms, brick comp. roof; A. Ten Eyck Brown, Archt.; A. Barili, Jr., Asso. Archt., both Forsyth Bldg., Atlanta; owner probably builds. 2-27

Miss., Jackson—The Gammill Co., Stewart Gammill, Pres., Sibley Ave., let contract at \$396,000 to W. J. McGee & Son, James Bldg., for superstructure of \$700,000, 12-story, 108 x120 ft., rein. conc., brick, granite and terra cotta, 300-room Robert E. Lee Hotel; Otis

Elevator Co., 122 S. President St., has elevator contract at \$75,000; Claude H. Lindsley, Archt., Jackson Tower Bldg., Jackson; Gardner & Howe, Engrs., Porter Bldg., Memphis, Tenn. 4-17

Mo., Kansas City—Easton Investment Co., E. T. Browning, Dwight Bldg., erect 11-story, 131-apartment hotel, 1315 Linwood Blvd.; Harry J. Kusel & Co., Contr., 35 S. Dearborn St., Chicago.

Mo., St. Louis—Sauerbrunn Construction Co., 1473 Arcade Bldg., erect \$10,000, 2-story, 42x42 ft., brick tenement, 2529-31 Chester St.; comp. roof, hot air heat; W. P. Manske, Archt., 4215 Olive St.

Mo., St. Louis—Sam Brown, 7522 Parkdale Ave., Clayton, ready for sub-bids for \$45,000, 2-story, brick, 10-apartment, Bellevue St. near Wise St.; Ben. Shapiro, Archt., Synd. Trust Bldg.

Mo., St. Louis—John Fourland, 4217a DeTonty St., let contract to General Engineering & Construction Co., Paul Brown Bldg., for \$40,000, 2-story, brick, 12-apartment, Davis and Vulcan Sts.; Ben Shapiro, Archt., Synd. Trust Bldg.

N. C., New Bern—North Carolina Hotel Co., H. A. Underwood, Archt., Hotel Carolina Bldg., Raleigh, Pres., soon start work on \$750,000, 11-story, conc., steel & brick tourist & commercial hotel at Union Point; cover 3 acres, 196 rooms, 6 apartments, ballroom on mezzanine floor over dining room will be 45x117 ft.; W. P. Rose & Co., Contra. Wayne Natl. Bank Bldg., Goldsboro; Raymond R. Eagle, Supvg. Engr., 149 Craven St., New Bern. 9-2

Tenn., Memphis—Following sub-contracts awarded on \$525,000, 12-story William Len Hotel, Main and Monroe Sts., under construction (forms up to 9th floor) for Hotel Beaumont, for Arthur M. Kaufman, Beaumont, Tex., for which W. Frank Ault, Moore & Turner Bldg., Little Rock, Ark., has general contract: Plumbing, heating & refrigeration, C. Wallace Plumbing Co., 2224 Summer St., Dallas, Tex.; millwork, Cole Mfg. Co., 789 S. Fourth St.; glass and glazing, Binswanger & Co., 655 Union St.; steel doors, buck and trim, Pidgeon-Thomas Iron Co., 94 N. Second St.; cast stone, Leob Stone Co., 860 S. Bellevue St.; lime, cement, Fischer Lime & Cement Co., 269 Walnut St.; struc. steel, Tri-State Iron Works, 677 N. Main St.; all Memphis; double-hung steel windows, Truscon Steel Co., Youngstown, Ohio; elevators, Shephard Elevator Co., 2425 Colerain St., Cincinnati, Ohio; plastering, C. B. Humphreys, Moore & Turner Bldg.; painting, Rexer & Dempsey, Riegler Bldg.; finish hardware, Gracy Bros. Hardware Co., 513 Main St.; marble and tile, S. W. Marble & Tile Co., all Little Rock, Ark.; rein. steel, Laclede Steel Co., Arcade Bldg.; orna. iron, Usana Manufacturing Co., 3510 Chouteau St., both St. Louis, Mo.; plans by Eugene John Stern, A. O. U. W. Bldg., Little Rock, call for 50x150 ft. structure, rein. conc., steel and brick, stone trim, tar and gravel roof, conc. and tile floors; Gardner & Howe, Engrs., Porter Bldg., Memphis. 2-13

Miscellaneous

Okla., Oklahoma City—Sunbeam Home Assn., Mrs. L. S. Gum, Chmn., Bldg. Comm., let contract to Campbell & Price, 605½ W. Main St., for \$65,000, 2-story, brick, stone and rein. conc. orphans' home; wood floors, comp. roof, steam heat; Hawk & Parr, Archts., First Natl. Bk. Bldg. 9-5

S. C., Spartanburg—Spartanburg Country Club let contract to Fiske-Carter Construction Co., 121½ W. Main St., for \$35,000 clubhouse to replace recently burned structure; brick and frame; plans by Lockwood Greene Engineers, Inc., R. E. Barnwell, Plume St., Spartanburg. 3-6

Schools

Fla., Haines City—Florida Military Institute, Capt. W. Eugene Jones, Commandant, let contract at \$10,770 to Davenport Lumber & Supply Co., Davenport, for remodeling and repairing 9 buildings. See Want Section—Building Material and Equipment. 4-10

Ga., Rome—Berry Schools, Miss Martha Berry, let contract to Batson-Cook Co., West Point, Ga., for \$500,000, 4-story and basement, struc. steel frame, rubble stone, brick and tile dormitory for girls; Coolidge & Carlson, Archts., 89 State St., Boston. 4-3

Ky., Ashland—Bd. of Education, J. W. Henderson, Jr., Sec.-Bus. Mgr., let contract at \$31,547 to Ham Spears for 12-classroom addition to high school; Henry N. Foster, Archt. 4-3

Mo., Kansas City—St. John's Catholic Seminary, R. C. Diocese of Kansas City, Rev. Thos. F. Lillis, 416 W. 12th St., let contract

to Math Rauen Construction Co., 326 W. Madison St., Chicago, Ill., for \$400,000, 1, 2 and 3-story, brick, rein. conc. and terra cotta building, Euclid Ave. and 72nd St.; O'Meara & Hills, Archts., Arcade Bldg., St. Louis; Maurice Carroll, Asso. Archt., 713 Linwood Blvd., Kansas City. 1-23

Mo., Sikeston—School Bd., R. E. Bailey, Sec., erect \$10,000, 2-story and basement, 30x50 ft., brick high school addition; Sam R. Smith, Contr., S. Pacific St., Cape Girardeau. 2-20

Tex., Amarillo—School Bd., G. G. Ordway, Pres., let contract at \$97,625 to W. Frank Little Construction Co., Amarillo Bldg., for addition to McKinley School; 12 classrooms, auditorium to seat 450, cafeteria 40x45 ft.; brick; Rittenberry & Carder, Archts., Fisk M. & P. Bldg. -123

Tex., El Paso—Bd. of Education, J. Walter Morrow, Pres., let contract at \$59,830 to H. T. Ponsford & Sons, 914 E. Missouri St., for 15-room and auditorium Government Hill School; Troost & Troost, Archts., Two Republics Bldg., let contract at \$19,379 to Ramsey Bros., 1614 E. Missouri St., for 8-room addition to Rusk School. 4-17

Tex., Plainview—School Bd. let contract at \$72,976 to Worth Building & Investment Co., W. T. Waggoner Bldg., Fort Worth, for high school addition. 3-13

Tex., Schulenburg—Catholic Church, Rev. F. X. Wolf, let contract at \$26,585 to A. J. Anders, Needville, Tex., for 1-story, brick, tile and conc. parochial school; Leo M. Dielmann, Archt., 306 E. Commerce St., San Antonio. 4-3

Va., University—University of Virginia, Dr. Edwin A. Alderman, Pres., reported, let con-

tract to Wilson Co., Charlottesville, Va., for \$150,000 George Rogers Clarke School.

Va., Williamsburg—Woman's Missionary Society, Virginia Conference, Methodist Episcopal Church, South, let contract at \$67,500 to J. W. Davis, Law Bldg., Newport News, for Browne Hall at College of William and Mary; 3 stories, brick, 39 rooms; plans by Chas. M. Robinson, Architect, Times-Dispatch Bldg., Richmond. 4-10

Stores

Ga., Atlanta—Walter T. Candler, Walton Bldg., started work on remodeling Lullwater Bldg., W. Peachtree St. and Grant Place, to be leased to Bernard-Hewitt & Co., Inc., Lullwater Bldg.; 6 stories, 95x170 ft., rein. conc., steel, brick and tile; 117,000 sq. ft. floor space; Ivey & Crook, Archts., Candler Bldg.; Massell Construction Co., Contr., Spring St. See Want Section—Building Material and Equipment. 4-3

La., New Orleans—Gov. H. C. Warmoth, 1800 Marengo St., has permit for \$10,000 improvements to second and third floors of building at 111 Exchange Place; W. H. Williams Co., Contr., Southern Bldg.; Burton & Fraenkel, Archts., 318 Carondelet St.

Miss., Cleveland—Gilmer Grocery Co. started work on brick and stone store; cement floors; construction of warehouse and filling station will follow completion of this building; O. B. Douglas Construction Co., Contr.

N. C., Charlotte—J. L. Staten, 208 Hawthorne Lane, remodel building, 223 W. Trade St., to be leased to G. B. Cabaniss & Co., 409 S. Tryon St. (women's wear shop); 2

stories, .25x110 ft.; Blythe & Isenhour, Contrs., Brevard Court; Louis Asbury, Archt., 1514 E. Fourth St.

Okla., Oklahoma City—Mrs. Anna Wiener, 1111 N. Kelley St., let contract to Bush Construction Co., 2134 W. First St., for \$15,000, 2-story, 45x60 ft. store and apartment; W. J. Laws & Co., Archts., First Nat'l Bank Bldg.

Tenn., Memphis—Mrs. Bessie Brooks has permit for \$30,000 improvements to building, 153-55 S. Main St., recently damaged by fire; Haverly Furniture Co., Lessee, 155 S. Main St.

Tex., Houston—E. E. Lawson let contract to M. G. Worrall, of E. H. Fleming Co., Democratic Bldg., for \$16,000 community center, 2139 Sunset Blvd.; 2 stories, brick veneer, cement floors; first floor to be occupied by 2 stores, 30x50 ft. and 20x50 ft.; upper floor for apartments, tile baths, hardwood floors; adjacent building will be super-service station; Jerry Thiel, Archt., Esperson Bldg.

Va., Richmond—Hill Crest Realty Corp., Grace American Bldg., erecting 2-story store and office building, 4th and Grace Sts.; Davis Bros., Contrs., 1716 Summit Ave.

W. Va., Bluefield—Jargo Realty Co., Inc., Welch, erect \$10,000, 2-story, brick building, Bluefield Ave. and Tyler St.

Theatres

Ky., Elizabethtown—F. W. Joplin and Cresap Hays let contract to Jenkins Construction Co. for 1-story, 42x115 ft., brick moving picture theatre.

Mo., Bagnell—G. W. Delozier, Lowry City, started work on 2-story and basement theatre; basement for garage purposes, first floor for theatre, and second for hotel of 40 rooms.

THE CLASSIFICATIONS IN THIS SECTION ARE:

WANT SECTION

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Machinery and Supplies

Bottling and Washing Machines.—Cleo Co. of America, Pierce and Polk St., Tampa, Fla.—Wants prices and data on bottling and washing machines for cleo syrup and ice cream concentrate flavoring plant.

Printing Equipment.—Maryland Independent Publishing Co., Inc., W. H. Valliant, Easton, Md.—Wants prices and data on used equipment for newspaper and job printing work, good condition.

Printing Press.—O. G. White, Box 154, Sebring, Fla.—Wants prices and data on small printing press with outfit suitable for church bulletin.

Shaper.—McKinney & Teague (Machine and Welding Shop), Russellville, Ala.—Wants prices and data on 16, 18 or 20-in. shaper; will exchange or sell outright new No. 40 Tupelo-Buffalo Blower.

Textile Machinery, etc.—Jamnadas Gopalji & Son (Mill and Gin Store Supplies), 4A, Bruce St., Fort, Bombay—Wants prices and data from manufacturers of following: Loom parts, spinning and weaving parts, doffing and cleaning combs, hydraulic leather ram ring, porcelain articles, needles, lubricating chain, bottles, card chain.

Carillon Canning Co., Inc., Box 801, Haines City, Fla., wants prices on following for canning plant:

- (1) Boilers
- (2) Conveyors
- (3) Electric Motors—1 to 5 h.p.
- (4) Water Pump (Electric)
- (5) Tank.

Grey Steel Products Co., 111 Broadway, New York City—Wants prices and data on following:

- (1) Cars — 22 12-yd. air dump, standard gauge
- (2) Cranes—25 ton, 8 wheel, standard gauge, steam or gasoline driven
- (3) Locomotives—6 11x16, standard gauge or larger, 4-wheel saddle tank, equipped with air dump car equipment
- (4) Shovels—2, 1½ to 1¾ yd.

Hasty Veneer Co., Inc., E. E. Candler, Maxton, N. C.—Wants prices and data on following for new plant:

- (1) Glue Room Equipment
- (2) Saw—swing, cut-off
- (3) Sawmill—short log
- (4) Trimmer—double-end
- (5) Trucks (Factory)
- (6) Wire Tying Outfit.

Moore & Hale, Bldrs., Bartlett, Tex.—Wants prices and data on following:

- (1) Band Saws
- (2) Saw Rigs
- (3) Sanders.

Sanitary Appliance Co., Inc., 308 Hughes St., Houston, Tex., will open new complete wholesale plumbing department and will carry representative line of fixtures and supplies, beginning May 1—Wants complete catalogs and jobbers discount sheets on following:

- (1) Brass Goods
- (2) Earthenware
- (3) Enameled Ware
- (4) Pipe (Soll)—and fittings
- (5) Water Closet Seats
- (6) Complete line of plumbing supplies.

Miscellaneous

Brass Strips.—R. O. Marks (Paving Contr.), P. O. Box 1308, Shreveport, La.—Wants prices on brass strips for use in terrazzo work.

Fire Escapes.—Davenport Lumber and Supply Co., Box 165, Davenport, Fla.—Wants prices and data on fire escapes.

Fire Siren.—City of Williston, W. B. Brantley, Clk., Williston, Fla.—Wants prices and data from municipality or firm on used fire siren, which can be heard within radius of 1½ to 3 mi.; quotations should include make and specifications.

Lime Kilns.—E. A. Lunsford, Hiltons, Va.—Wants prices and data on new and used lime kilns.

Transits and Levels.—G. F. Archer, Aiken, S. C.—Wants prices and data on engineers' transits and levels.

Haynes Box, E. E. Robinson, Morgan Plan Bank Bldg., Meridian, Miss., has patent on cold drink box—Wants to contract with firm in position to manufacture same

Independent Electrical Supply, Inc. (Wholesale Electrical Supplies), S. B. Cardo, 334 W. Boulevard, Charlotte, N. C.—Wants to become distributor for manufacturer of electrical equipment; requests catalog and prices.

Building Material and Equipment

Albert E. Gredig, Archt., 327 Mercantile Bldg., Knoxville, Tenn., wants prices on following for \$40,000 church:

Cast Stone
Roofing—asphalt shingle.

A. V. Meigs, Supt. of Education, Dadeville, Ala., wants prices on following for \$25,000 school:

Flooring—hardwood
Roofing—built-up
Steel Sash and Trim
Tile—interior.

Belmar Engineering Co., 450 Calvert Bldg., Baltimore, Md., wants prices on following for dwellings:

Cast Stone
Flooring—linoleum, tile, composition
Roofing—tile.

Capt. W. Eugene Jones, Commandant, Florida Military Institute, Haines City, Fla., wants prices on following in connection with remodeling buildings:

Furniture, Floor Coverings, Shades and Draperies—for 30 rooms.
Gymnasium Equipment
Kitchen and Dining Room Equipment.

Ivey & Crook, Archts., Candler Bldg., Atlanta, Ga., want prices on following in connection with \$60,000 improvements to 6-story Lullwater Bldg.:

Elevators
Flooring—linoleum, composition
Metal Doors
Tile—hollow
Vault Lights.

Harold Mattern, Contr., Commercial Bldg., Tulsa, Okla., wants prices on following for \$73,000 dwelling:
Flooring—linoleum
Limestone.

J. E. Phillips, Darlington, S. C., wants prices on following for \$50,000 hotel and business building:

Electric Refrigerators
Flooring—linoleum
Sprinklers
Steel Sash and Trim.

O. G. White, Box 154, Sebring, Fla., wants prices on following for church, Arcadia, Fla.

Metal Ceilings
Roofing—asbestos shingle
Steel Sash and Trim.

Paul G. Silber & Co., Archts., 331 Bedell Bldg., San Antonio, Tex., want prices on following for \$33,000 city hall and fire station, Ballinger, Tex.:

Cast Stone
Flooring—hardwood, terrazzo, composition
Metal Doors and Partitions
Roofing—Overhead Doors.
Roofing (flat)—built-up
Steel Sash
Tile—hollow
Vaults
Ventilators
Brass and Bronze Work
Miscellaneous Iron.

Wade & Oemler, Archts., Exchange Bldg., Miami, Fla., want prices on following:

Cast Stone
Electric Refrigerators
Flooring—hardwood, terrazzo, tile
Incinerator
Roofing—tile
Steel Sash and Trim
Brass and Bronze Work.

Watt & Sinclair of Florida, Inc., Box 2007, Palm Beach, Fla., want prices on following for \$300,000 dwelling, Lantana, Fla.

Cast Stone
Electric Refrigerators
Flooring—hardwood, linoleum, tile
Incinerator
Roofing—tile
Steel Sash and Trim
Tile—hollow
Ventilators
Brass and Bronze Work.

Will N. Noonan Co., Archt., 301 Builders Exch. Bldg., San Antonio, Tex., wants prices on following for church, Gonzales, Tex.:

Cast Stone
Flooring—tile
Roofing—tile.

Williams Lumber Co., Contr., 13th St., Columbus, Ga., wants prices on following for \$60,000 high school:

Cast Stone
Metal Doors
Roofing—built-up
Tile—hollow
Ventilators.

Winton Barker, Jr., 7209 Dartmouth St., University City, Mo., wants prices on following for \$25,000 residence:

Electric Refrigerators
Flooring—hardwood, linoleum, tile, composition
Steel Sash and Trim.

W. T. Hall (Manufacturers' Agt.), Lexington, N. C., wants prices on:
Tobacco Barns.—Galvanized iron.

Bids Asked

Air Compressor.—Office of Ch. of Engrs., Washington, D. C.—Bids May 1 for portable gasoline engine driven air compressor outfit, complete.

Armored Cars and Tanks.—Ch. of Ordnance, War Dept., Munitions Bldg., Washington, D. C.—Bids May 12 for 5 armored cars and 18 tanks.

Boats.—U. S. Coast Guard, Washington, D. C.—Bids May 5 for constructing and equipping 18 to 22 motor boats with wood hull, 34 ft. long, 8 ft. beam, 3 ft. draft, equipped with 6 cylinder engine rated about 200 h. p. at 1950 r. p. m.

Boats.—U. S. Coast Guard, Washington, D. C.—Bids May 5 for constructing and equipping 8 to 12 motor boats with wood hull, 34 ft. long, 8 ft. beam, 3 ft. draft, powered with 12 cylinder Liberty engine rated 400 h. p. at 1700 r. p. m., engines to be furnished by Government.

Bridges, etc.—State of West Virginia. Bids for 4 culverts and 3 bridges. See Construction News—Roads, Streets, Paving.

Bridges.—State of Missouri. Bids for 31 bridges. See Construction News—Roads, Streets, Paving.

Bridge.—Oakland, Md. See Construction News—Bridges, Culverts, Viaducts.

Bridge.—State of Virginia. See Construction News—Roads, Streets, Paving.

Cheesecloth.—Marine Corps, Q. M. Dept., Washington, D. C.—Apr. 28 for 2000 yd. cheesecloth, delivery Quantico, Va.

Coal (Bituminous).—U. S. Engr. Office, McCall Bldg., Memphis, Tenn.—Bids May 7 for bituminous coal.

Dikes.—U. S. Engr. Office, Memphis, Tenn.—Bids May 6 for 29,700 ft. permeable pile dikes in Missouri, Kentucky, Arkansas and Tennessee. See Construction News Columns—Miscellaneous Construction.

Dish-Washing Machine.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 28 for dish-washing machine, delivery Hampton Roads, Norfolk, Va.

Drainage Work.—Comms., Lappatubby Drainage Dist. in Union and Pontoto Counties, Office of C. Lee Crum, Atty., Courthouse, New Albany, Miss.—Bids May 5 for constructing main canal, canal cleanout and small laterals. See Construction News Columns—Drainage, Dredging and Irrigation.

Dredging.—U. S. Engr. Office, foot of Front St., Norfolk, Va.—Bids May 14 for dredging approx. 1,919,639 cu. yd. of material in Alligator River, Alligator River-Pungo River Land Cut, Wilkerson Creek, and Pungo River, North Carolina. See Construction News Columns—Drainage, Dredging and Irrigation.

Gasoline and Oils.—Quartermaster Supply Officer, U. S. A., Washington, D. C.—Bids Apr. 28 for 60,000 gal. gasoline, 50 lb. grease and approx. 1200 gal. oils.

Hardware, etc.—Commr. of Indian Affairs, St. Louis, Mo.—Bids May 7 for hardware, plumbers' supplies, etc., as required during 1931; includes anvils, augers, axes, babbit metal, cow bells, hand bells, rubber belting, sliding T bevels, auger bits, saw blades, blowers, carriage bolts, etc.

Hoist.—U. S. Engr. Office, Galveston, Tex.—Bids Apr. 28 for steam engine hoist.

Hoisting Engines.—U. S. Engr. Office, Huntington, W. Va.—Bids May 5 for hoisting engines.

Launch Hull.—U. S. Engr. Office, McCall Bldg., Memphis, Tenn.—Bids May 6 for constructing and delivering 36 x 9 x 4' 9" steel launch hull.

Levee.—U. S. Engr. Office, P. O. Box 667, Vicksburg, Miss.—Bids May 16 for constructing approx. 4,385,000 cu. yd. earthwork, south bank, Arkansas River, Arkansas. See Construction News Columns—Miscellaneous Construction.

Levee.—U. S. Engr. Office, P. O. Box 667, Vicksburg, Miss.—May 16 for constructing approx. 10,400,000 cu. yd. earthwork, Mississippi River in Mississippi, Arkansas and Louisiana. See Construction News Columns—Miscellaneous Construction.

Machine Shop Equipment, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Apr. 29 for high speed steel hand reamers; May 6 for type setting machine and universal saw trimmer machine.

Machinery, Tools, etc.—Bd. of Awards, Office of City Register, City Hall, Baltimore, Md.—Bids Apr. 30 for furnishing machinery, tools and other materials for automobile, machine and plumbing shops for Dept. of Education.

Miscellaneous.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids May 10 for following, Sch. 2553:

Motor trucks, motor bus, factory trucks, parcel and dish trucks, corrugated roofing, metal-working machine, welding machine, refrigerator, pipe tapping machine, winches, etc.

Miscellaneous.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids May 1 for following, Sch. 1551:

Material and equipment for overhauling Panama Canal locks (material for jacking and rolling system, pump unit, pipe and fittings, stop and check valves, flexible copper pipe, hydraulic pressure gages, pneumatic tools, electric welding machine, etc.) and platform crane truck.

Nails.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 29 for 5400 lb. wire nails, delivery Quantico, Va.

Pipe (Vitrified).—See Sewer Construction.

Pipe (Reinforced Concrete).—See Sewer Construction.

Pipe (Cast Iron).—W. E. Banister, Sec., Police Jury, Washington Parish, Box 267, Bogalusa, La.—Bids May 2 for 900 ft. of 4-in. cast iron water pipe.

Pipe (Cast Iron).—See Sewage Treatment Works.

Pipe (Reinforced Concrete).—See Sewer Construction.

Presses (Printing).—Pur. Agt., Government Printing Office, Washington, D. C.—Bids Apr. 30 for 6 presses for printing statistical tabulating cards.

Outboard Motors (Gasoline).—U. S. Engr. Office, Huntington, W. Va.—Bids Apr. 28 for outboard gasoline motors.

Reinforcing Steel.—See Sewer Construction.

Refrigerating Unit (Mechanical).—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 29 for mechanical refrigerating unit, delivery Hampton Roads, Norfolk, Va.

Remodeling Elevator, etc.—Treasury Dept., Office of Supervising Archt., Washington, D. C.—Bids May 7 for remodeling electric freight elevator, etc., U. S. custom house, New Orleans, La.

Road.—Dallas, Tex. See Construction News—Roads, Streets, Paving.

Roads.—State of West Virginia. Bids for 19 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Virginia. Bids for 4 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Tennessee. Bids for 8 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Missouri. Bids for 81 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Georgia. Bids for 5 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Maryland. Bids for 7 roads. See Construction News—Roads, Streets, Paving.

Road Machinery.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 29 for road maintainer, delivery Parris Island (Port Royal), S. C.

Road Material.—Quartermaster, Camp Knox, Ky.—Bids May 12 for 10,000 gal. bituminous road material.

Rope.—U. S. Shipping Bd., Washington, D. C.—Bids Apr. 28 for manila rope for period of 2 or 5 months.

Roads.—State of Oklahoma. Bids for 7 roads. See Construction News—Roads, Streets, Paving.

School Furniture and Equipment.—Bd. of Trustees of City Schools, Office of Mayor, Greenville, Miss.—Bids May 6 for school furniture and equipment.

School Furniture.—Executive Committee of Bd. of Education, care Hume-Fogg High School Bldg., Nashville, Tenn.—Bids May 5 on unit basis, on following school furniture: 700 single desks, 30 single rears, 14 teachers desks, 350 tablet arm chairs or 350 sittings in recitation benches with tablet arms; also on Domestic Science equipment for 2 centres.

Sewer Construction.—Comms. of Sewerage, Louisville, Ky., Woolsey M. Caye, Tech. Engr., 400 Marion E. Taylor Bldg. Plans and specifications expected to be completed on or about May 15 for receiving bids some time in June for first section of Southwestern Outfall sewer; work will probably consist of constructing 5840 ft. of rein. conc. sewer 27 ft. 6 in. high x 18 ft. 4 in. wide; 4340 ft. of rein. conc. sewer, 23 ft. 6 in. high x 15 ft. 8 in. wide with outlet structure into Ohio River; quantities involved will probably be 627,000 cu. yds. excavation, 740,000 cu. yds. of backfilling, 85,300 cu. yds. of conc.; 8,170,000 lbs. rein. steel.

Sewer Construction.—Jefferson City, Mo., F. E. Ross, City mgr.—Bids May 5 for labor and material for constructing sewer, Sewer dist. No. 48 and No. 49; work includes sewer pipe; manholes, pavement repairs, excavation, etc.

Sewer Construction.—Bd. of Awards, Baltimore, Md.—Bids April 30 for sanitary sewers and storm drains. Storm Water Contr. No. 146; work includes rein. conc. pipe drain; vit. pipe sewer and drains; underdrain, manholes, etc.; Milton J. Ruark, Sewerage Engr.

Sewage Treatment Works.—City of Chattanooga, Tenn.—Bids May 9 for sewage treatment works, including outfall sewer, pre-settling tanks, aeration tanks, settling tanks, sludge digestion tanks, drying beds, building, connecting conduits, pipe lines and appurtenances; following approximate quantities: 10,000 cu yds. excavation; 2000 cu. yds. conc.; 100 tons steel reinforcement; 75 tons c. i. piping; 3400 sq. ft. sludge bed covering; 1000 ft. outfall sewer; George B. Gascoigne, Engrs., 1140 Leader Bldg., Cleveland, O.

Streets.—St. Louis, Mo. See Roads, Streets, Paving.

Street.—Jefferson City, Mo. See Construction News—Roads, Streets, Paving.

Tanks (Sludge Digestion, etc.)—See Sewage Treatment Works.

Water and Sewers.—W. C. Trotter, Sec., Mississippi Building Com'n., Jackson, Miss.—Bids May 2 for water, sewerage and electrical distribution system at Ison Hall Law

School and cafeteria buildings at University of Mississippi, Oxford; plans, etc., at office of C. H. Lindsley, Tower Bldg., Jackson.

Weighing Apparatus.—Purchase Section, Bureau of Standards, Washington, D. C.—Bids Apr. 28 for 9 metal weights, 1000 lb. each, mechanism for operating weights, and dead weight machine for applying loads up to 10,000 lb. in increments of 100 lb.

Trade Literature

Hampton Roads Port.—Document No. 14 prepared by the Virginia State Chamber of Commerce, Richmond, presents a comprehensive traffic survey of Hampton Roads port, with intensive studies of selected import and export commodities.

Steam Turbines.—The General Electric Company, Schenectady, N. Y., has issued a booklet on steam turbines, outlining their general principles, efficiency, convenience in operation, construction, generators and various details. The publication is GEA-1011-A, superseding GEA-1011.

South Plains of Texas.—A booklet describing and illustrating phases of farm life on the South Plains of Texas has been issued by South Plains, Inc., Lubbock, Tex. Fifteen counties are embraced in the South Plains region, containing a total of 2,500,000 acres of land in cultivation and 5,000,000 acres of fertile virgin and tillable land.

Improved Boiler Settings.—The Quigley Furnace Specialties Company, Inc., New York, has issued a bulletin, "Hytempite in the Power Plant," which tells by text and illustration how boiler settings may be improved. The publication deals with details of construction and maintenance in power plants.

Cotton Harvester.—A cotton harvester, cleaner and hull extractor, embodying the Smith-Conrad combine, is illustrated and described in a folder being distributed by the General Cotton Harvester Company, with the Fort Worth Steel and Machinery Company, Fort Worth, Tex., manufacturers. The machine is built in two models, for a single row and two rows.

For Arc Computing.—A 32-page book, "Table for Use in Computing Arcs, Chords and Versines," has been published by the Chicago Bridge & Iron Works, Chicago, Ill. The table is intended for use with the squares and logarithms of Inskip and Smoloy. The book may be purchased for \$1.00 from the author, Harry Glow Boardman, C. E., 1305 West 105th street, Chicago.

Drag Shovel Attachments.—The Page Engineering Company, Chicago, manufacturers of dragline excavators, slackline cableways, scraper buckets and clamshell buckets, is distributing Bulletin 900 illustrating and describing Page drag shovel attachments, developed to augment the scope of the Page dragline bucket for digging hard materials and following unusual contours, slopes or grades.

Partitions.—The J. G. Wilson Corporation, New York, has issued catalogue 38 devoted to sectionfold and rolling partitions, designed to increase the utility of floor area in schools, churches and public buildings. Features of these products are said to include high quality of raw materials used in construction, skilled craftsmanship and practical construction designs.

Virginia.—The Virginia State Chamber of Commerce, Richmond, has issued the spring number of Virginia, an official publication of that organization and published in the interest of the state. It presents a large number of views, with brief descriptions, of historic and interesting scenes in the state.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Republic Research Corporation.

Marking another step in the development of its plans, following recent changes in its organization which involved a change of name, the Republic Steel Corporation, Youngstown, Ohio, formerly the Republic Iron and Steel Company, has incorporated the Republic Research Corporation. F. J. Griffiths, former board chairman of the Central Alloy Steel Corporation, will head the new research unit as president, establishing headquarters at Massillon, Ohio, where extensive facilities for steel research already exist; these will be materially enlarged. Establishment of this research division is indicative of the importance attached by the new Republic management to the development of improved products and processes. It is announced that Tom M. Girdler, who served as president of the Jones and Laughlin Steel Corporation from January, 1928, until last fall, will head the Republic Steel Corporation.

New W-K-M Company Sales Manager.

W-K-M Company, Inc., Houston, Tex., manufacturers of oil field, pipe line and industrial equipment, announces appointment of Alexander J. Duval as manager of sales for Western territory, with offices at 205 West Wacker drive, Chicago. Mr. Duval was with the Johns-Manville Corporation, New York, for 11 years, seven of which he served as manager of the public utilities division.

New Hercules Explosive.

The Hercules Powder Company, Wilmington, Del., announces a new type of explosive to be marketed under the name of Gelamite, said to combine the safety and economy features of high ammonia content dynamites, with high water resistant characteristics. It is semi-plastic, easy to handle and adaptable either to open or underground shooting and is produced in three strengths calculated to reduce blasting costs.

Ferry Properties Offered for Sale.

Bids will be opened May 15 by the Cooper River Ferry Liquidation Commission, A. O. Halsey, chairman, Charleston, S. C., for the purchase of its operating ferry properties, consisting of two double-end ferry boats and ferry docks and slips at Charleston, Hog Island and Mount Pleasant. Proposals may be submitted for the properties in whole or in part.

J. D. Harper.

Fairbanks, Morse & Company, Chicago, announce the death on April 6 of J. D. Harper, manager of the Diesel engine division of the company and recognized as a leading authority on the Diesel engine. Mr. Harper was closely associated with the development of the Diesel engine and was identified with the activities of the Diesel Engine Manufacturers Association.

Chain Belt Distributors.

The Chain Belt Company, Milwaukee, Wis., announces appointment of the R. B. Everett Company, Houston, Tex., as distributors for Rex construction equipment, including saw rigs, plaster and mortar mixers, pumps, concrete mixers, pavers, contractors' elevators, etc. The J. D. Adams Manufacturing Company, Indianapolis, Ind., has been appointed exclusive distributors in the Indianapolis territory for the Chain Belt Company's new Champion Rex paver and its companion, the Rex road pump. Other Rex equipment made by the Chain Belt Company includes chain, transmission and conveying equipment, material handling systems and belt conveyors.

Florida Resources.—The Florida State Department of Agriculture at Tallahassee has compiled and issued a series of three books dealing with resources and development of the state. For the purpose of assembling the information in a compact and readable form, the state is divided into three sections according to climatic, geographical and productive characteristics. One publication is devoted to North and Northwest Florida, another to Central Florida and the third to South Florida.

Concrete Steel Moves Offices.

The Concrete Steel Company, New York, announces removal of its offices from 42 Broadway to No. 2 Park Avenue. This organization specializes in the manufacture of concrete reinforcing specialties, including reinforcing steel for concrete fireproof building products.

Moves New York Office.

The Morris Machine Works, Baldwinville, N. Y., announce the removal May 1 of their offices in New York City from 26 Cortlandt street to the Pennsylvania Building at 225 West 34th street. Products of the company include pumps and dredges of various types and for varying purposes.

Staff Engineer for Laboratory.

The Pittsburgh Testing Laboratory, Pittsburgh, Pa., announces appointment of M. L. Carr as staff engineer, to serve as engineering consultant and to co-operate with clients of the laboratory in solving problems relating to purchasing, production and sales.

Re-elected Chamber of Commerce President.

Durward C. Collier of Athens, Ga., is now serving his second term as president of the Athens Chamber of Commerce, having recently been re-elected to the position.

O. K. Clutch New York Office.

The O. K. Clutch and Machinery Company, Columbia, Pa., recently opened a New York office at 55 West 42nd street, with R. B. Palmer, Jr., in charge.

Florida Industrial Program.—To present in brief form the proposed industrial program of the Florida State Chamber of Commerce Industrial Committee, Jacksonville, the committee has issued a pamphlet prepared by William L. Wilson, chairman, setting forth plans for assisting existing industries, encouraging the use of Florida products, for co-operation with other agencies for locating new industries, and outlining its program of helpful legislation.

Glass Factory Directory.—The 1930 Glass Factory Year Book and Directory is being distributed by the American Glass Review, Pittsburgh, Pa., publishers. The publication presents practical and useful information to the glass industry, including data on manufacturers of glass products in the United States and Canada, with classifications of products, and indices of raw materials and equipment, of finished products and manufacturers.

Centrifugal Pump Accessories.—Bulletin 501 devoted to centrifugal pump priming, with notes on the theory of suction lift, suction losses, etc., has been issued by Barrett, Haentjens & Co., Hazleton, Pa. The company manufactures pumps of various types, valves and accessories and maintains Southern offices in the Brown-Marx Building, Birmingham, Ala., and the National Bank of Commerce Building, St. Louis, Mo.

Potash Deposits.—The U. S. Department of Commerce, Bureau of Mines, has issued bulletin 316 detailing commercial possibilities of potash deposits of Texas and New Mexico. It discusses the economic rather than scientific side, and is designed to stimulate public interest in these deposits by showing that their exploitation on an adequate scale may result in production and delivery of potash salts to the consumer at a price at least as low as that now paid for foreign potash.

Commercial Concrete Plants.—The Butler Bin Company, Waukesha, Wis., has issued bulletin No. 180 devoted to Butler commercial concrete plants using the mixed-in-transit method. The publication presents a comprehensive description of the plants, with a number of illustrations showing their application and lay-outs to meet varying conditions. Among popular units are loading plants for truck-mounted mixers, portable type plant for end-loading truck mixers, counterweighted pony charging hopper, end-loading of aggregates and cement, working platform showing gate levers and scale parts banked in convenient location, two-compartment weighing hopper, enclosed plants with storage bin, unit type bins and other units. One illustration pictures a transit mixer loading plant of the Penniman Sand & Gravel Company, at Dallas, Texas, completely enclosed for year-round operation; another shows a 135-cubic yard plant of the Turner Sand & Gravel Company, at San Antonio, also completely enclosed.

Reforestation Experiment in South Carolina Sponsored by Textile Mill Head

The belief that relief for Southern agriculture and to a certain extent for industry lies in the fullest utilization of all available land in the production of crops of one kind or another prompted Henry P. Kendall, Boston, Mass., textile manufacturer with mills in Illinois, Massachusetts, Rhode Island, North and South Carolina to undertake a comprehensive reforestation project in and near Camden, South Carolina. In traveling over the Carolinas, visiting the five units comprising the Kendall Mills Division of the Kendall Company, Mr. Kendall saw millions of acres of land lying idle. He consulted experts, studied the past history of similar lands, and discovered that these fields were once covered with long-leaf pine forests yielding a splendid timber, and furthermore that for more than a century turpentine and resin had been staple crops. In other words, when crops failures came in the past, every farmer had timber to fall back on, whereas today the forests are gone and the South and other sections of the country are crying aloud for farm relief.

Mr. Kendall, therefore, decided to sponsor a reforestation project with a view to presenting an example of what can be done in this direction. Accordingly a tract was prepared and planted with long-leaf pine, slash pine, walnuts and pecans. The work was done in conjunction with the State Forester of South Carolina. Every precaution was taken to reduce the fire hazard to a minimum. Broom straw, grass and scrub oaks, which created a menacing thicket, were burned off. The reforestation project has created widespread interest and indications are that others will follow Mr. Kendall's example.

The Kendall Co. has also been co-operating with colleges, agricultural de-

partments, and other agencies in South Carolina which are endeavoring to encourage the farmers to produce better staple cotton by using pedigreed seed and by exercising greater care in weevil control, fertilizing, etc. For three years the company has paid a premium on staple raised from pedigreed seed, many thousands of bushels of which have been furnished to farmers at cost by the company. This whole work of better cotton is increasing the income of farmers and so helps to stabilize the whole employment situation, Mr. Kendall feels, since one of the major reasons for people flocking to the mills for employment is the sub-standard of earnings on the farms.

A number of reasons why reforestation is desirable are summarized briefly as follows by Mr. Kendall:

1. It is a paying investment.
2. As a means of providing future generations with timber.
3. To utilize millions of acres of land which now are idle because they either are too hilly or are not adapted to cultivation of crops.
4. As a means of employing labor on the farm the year-round instead of seasonally.
5. To replenish game.
6. To transform an unsightly landscape into a beautiful landscape.
7. To stabilize climate, breaking up the sweep of storms.
8. To take from under the plow millions of acres of land which really are ill-adapted to crops but are well adapted to the growing of trees.

Contract for \$500,000 Dormitory

Rome, Ga.—General contract to erect a \$500,000 dormitory here for the Martha Berry School has been awarded to the Batson-Cook Co., West Point, Ga. Plans by Coolidge & Carlson, Boston, Mass., call for a building of 4 stories and basement with tower, of reinforced concrete and structural steel, with brick and stone walls.

ENLARGING GRAIN STORAGE CAPACITY IN TEXAS

39,000,000-Bushel Elevator Capacity Estimated

Dallas, Tex.—The construction of grain elevator facilities in Texas now under way is expected to provide an additional storage capacity of 11,000,000 bushels, according to estimates here. Port and terminal elevators last year afforded a total storage capacity of approximately 28,000,000, while additions in course of construction will increase this total to 39,000,000 bushels. These figures take into account only the large elevators at principal grain markets and terminal points in the state. Country storage capacity, including small elevators along the important railroads in the grain belt, was estimated last year at 17,900,000 bushels and it is being rapidly increased—probably in proportion to the increase in storage capacity at terminal points.

Major elevator construction under way includes a 700,000-bushel addition to the Burrus Elevators, Dallas; 6,000,000-bushel elevator B at Galveston of the Galveston Wharf Company; 750,000-bushel addition to Lone Star elevators at Fort Worth; 700,000-bushel addition at Lubbock for the Tex-O-Kan Flour Mills, which is also building a 300,000-bushel addition at Kingfisher, Okla., and an 800,000-bushel addition at Fort Worth for the Kimbell Milling Company. The Diamond Mill and Elevator Company has awarded contract for a 500,000-bushel addition at Sherman and the Wichita Mill and Elevator Company is building additional storage at Wichita Falls, of 1,250,000 bushels. Houston recently voted \$1,500,000 bonds to increase the storage capacity of the public elevators to 3,500,000 bushels and a large number of small projects are under way in the wheat-growing district of northwest Texas.

A Recipe For Individual Control of Accidents

By LEWIS A. DEBLOIS, Director Safety Engineering Division, National Bureau of Casualty & Surety Underwriters, in Public Safety, issued monthly by the National Safety Council, Chicago.

1. Appreciate the seriousness of their threat and actually *desire* to prevent them. Out of this will come a sense of personal responsibility for their prevention.

2. Forget all about luck, or fate, or Providence as a possible dispenser of these unexpected mishaps. Accidents are man-made. Believe yourself the master of your own life and have faith in your ability to foresee its dangers and guard against them.

3. Do not consider yourself immune from accidents; realize that your past experience may mislead you. All persons are subject to accidents.

4. Understand that physical injury is not the accident, but is only one of the possible results of an accident. Appreciate that an accident which produces no injury may result, when repeated, in injury or even death. Prevent, if possible, the accidents, and the injuries will take care of themselves.

5. Each time you are brought close to an accident, or "near-accident," forget the question "who was responsible"?—It only clouds the issue. Don't look for "the cause." Try to discover all the causes—for there will be many. Go to the bottom of them. Don't be stopped by such vague generalities as "carelessness" or "human failure"; they are alibis—get down to the basic facts.

6. When you have done this, decide which one, or ones, you yourself could have removed, and which would have been the most effective. Forget what the other person might have done.

7. Make up your mind that nothing of the sort shall occur to you again—that, in the future and for all time, you will do what is necessary.

8. Realize that this course of action will require effort at first, but that out of it will eventually come a habit of thought and habits of life which will cost no appreciable effort.

9. Persevere. Learn something constructive from each of your own experiences and those of others. Adopt it into your own life. The stakes are high—the results will be worth while.

10. Do not fear danger. Try to meet it unafraid.

11. Do not fear to take a chance, weigh the possible consequences and then decide.

12. Remember that life is our most priceless possession—and, next to life, life-time.

\$2,000,000 University of Virginia Building Program

University, Va.—Requests of over \$1,793,000 made to the University of Virginia within the past year may mean a building program of \$2,000,000 for that institution within the next two years, according to President E. A. Alderman. A \$300,000 stadium will be erected with funds donated by Frederic William Scott, Richmond, recently elected rector of the university, and a \$350,000 law building donated by William Andrews Clark, Jr., of Butte, Mont., an alumnus. Work is expected to begin soon on a \$200,000 home for nurses and a \$150,000 final addition to the heating plant, funds for the former to be provided from a state appropriation of \$115,000; gift of \$50,000 from the Conrad Hubert estate, and \$35,000 from the John B. Cobb estate. Mr. Cobb also bequeathed the university \$100,000 for a new wing on the Cobb Chemical Laboratory and Mrs. Evelyn M. B. Tiffany a similar sum for building a museum of art, while the General Assembly appropriated \$250,000 for a new \$500,000 engineering building, provided there is a surplus at the end of the year, the University to raise the balance.

\$2,500,000 Telephone Building Contract Awarded

San Antonio, Tex.—General contract to erect a \$2,500,000 administration and equipment building here for the Southwestern Bell Telephone Co. has been awarded to the McKenzie Construction Co., San Antonio. The structure will be 8 stories and basement, 212 by 121 feet. I. R. Timlin is the architect and W. J. Knight & Company, engineers, both of St. Louis. B. D. Hull, St. Louis, is the chief engineer of the telephone company.

Bids on \$750,000 Gadsden Hospital

Gadsden, Ala.—Bids will be opened May 12 by the Missionary Servants of the Most Blessed Trinity, operating the Holy Name of Jesus Hospital, to erect a \$750,000 hospital building here, of 6 stories, basement, sub-basement and tower. The main section will be 130 by 94 feet, with two wings, 39 by 35 feet. Schmidt, Garden & Erikson, Chicago, are the architects and J. P. Burke is the resident engineer. Contractors estimating include: J. S. McCauley Company, Grahn Construction Company, National Construction Company and the Capital Construction Company, all of Atlanta, Ga.; Murphey Pound, Columbus, Ga.; Batson-Cook Company, West Point, Ga.; John M. Geary Company, Asheville, N. C.; Frost Construction

Company, Montgomery, Ala.; O. M. Gwin Construction Company, New Orleans, La.; Smallman Construction Company, Day & Sachs, A. J. Honeycutt Company, Holley Construction Company and the Foster-Creighton Company, all of Birmingham, Ala.; J. A. Jones Construction Company and the Southeastern Construction Company, Charlotte, N. C.; the Hutter Construction Company, Fond du Lac, Wis., and the S. & W. Construction Company, Memphis, Tenn.

TO MARKET FROZEN GEORGIA PEACHES

New Company Organized to Build Plants in Different Sections of State

Montezuma, Ga.—With a capitalization of \$250,000, Icebound Products, Inc., have organized to build a plant here for freezing Georgia peaches and marketing them, according to W. R. Tucker, Atlanta, agricultural agent of the Atlanta, Birmingham & Coast Railroad, who has been a leading figure in the development of a new process to freeze peaches in their original form and make it possible to market them at any place in the world and at any time in the year. Plans of the company contemplate the construction of a number of packing plants in various parts of the state, where peaches will be packed in dry ice for shipment. The first plant will be built at Montezuma. It is announced, and engineers are now conferring with Mr. Tucker on plans for the building and special refrigeration machinery. It is expected to have the plant in operation by the time the first peaches ripen in the Montezuma belt.

Preliminary investigations and experiments, prior to the organization of the company, are said to have involved a cost of \$30,000, to assure the promoters of the project that the enterprise is sound and practicable, both from the viewpoint of the investor and the peach grower, whose interests have been paramount in the development of details. Commissioner of Agriculture Eugene Talmadge and A. D. Jones, director of the bureau of markets, have aided in the investigations and defraying the expenses and the proposition has also received the support of the Coca-Cola Company, Fruit Growers Express, United States Department of Agriculture, Atlantic Ice and Coal Company, the Georgia Power Company and other firms and individuals. Officers and managers of the plant will be selected by the stockholders and directors of the company.

Samples of peaches frozen by the process to be used in the plant were recently served at a dinner in Atlanta of the Atlanta Retail Food Dealers' As-

sociation. Referring to these samples, Mr. Tucker is quoted as follows: "I need not dwell upon the details as to the process. The samples speak for themselves. Thousands of samples have been distributed throughout the United States, thanks to the recent development of dry ice. From housewives, food dealers, the country's largest hotels and people in all walks of life comes the same story. The peaches taste like peaches just off the trees."

NATURAL GAS COMBINATION PLANNED

Moody-Seagraves Interests Promoting Project

Houston, Tex.—O. R. Seagraves of the Moody Seagraves Company, Houston, is developing plans for a large combination of natural gas interests operating in the Middlewest and Southwest. Through the Missouri Valley Gas Company, a Moody-Seagraves property, which is building a 24-inch natural gas pipe line from Stevens County, Kansas, to Lincoln and Omaha, Nebraska, Mr. Seagraves is said to have reached an agreement with the United Light and Power Company, the North American Light and Power Company and the Lone Star Gas Corporation, controlling artificial and natural gas plants in central Kansas, eastern Nebraska and Iowa. The Lone Star Gas Corporation, Dallas, owns and operates one of the largest natural gas systems in the Southwest, with consumers in Oklahoma and Texas, including the cities of Dallas, Fort Worth and Wichita Falls. It also owns manufactured gas plants in Council Bluffs, Iowa, while the combined group owns extensive natural gas properties in the Texas Panhandle and, through the Moody-Seagraves arrangement, will control gas reserves in the Stevens County field. Plans call for the immediate construction of pipe lines of large capacity into the Texas Panhandle to augment the gas reserves mentioned above.

Reclaiming Tennessee Waste Lands

Memphis, Tenn.—According to R. S. Maddox, of the State Forestry Bureau, Nashville, 2,000,000 acres of waste land in Tennessee will have been reclaimed and covered with timber, upon the completion of an extensive reforestation program which has been undertaken by the Bureau. In an address to delegates of the twelfth annual Southern Forestry Congress here, Mr. Maddox stated that the Bureau hopes to have 1,000,000 seedlings in its nursery for distribution among Tennessee land owners by the end of the present growing season.

United States Leads in Production of Barite

With South Supplying Over 90 Per Cent of Domestic Output

The United States is now the leading source of supply and in the last few years has produced nearly half the world's output of barite, according to the United States Bureau of Mines, Department of Commerce. Since 1921, this country has produced an average annual output of 214,000 short tons of barite, about 90 per cent coming from the Southern states.

The commercial application of barite, sometimes called "barytes," or "heavy spar," as such, is largely dependent on the fact that it is a heavy, white mineral, chemically inert, and comparatively cheap. Barite enters into commerce in the following forms:

Crude barite, or "tuff," is sold as it comes from the ground, except as it may have to be washed and jigged to remove earthy and mineral impurities. It is the raw material for the manufacture of ground barite, barium chemicals, and lithopone.

Ground barite is the crude ore which has been washed and jigged and then ground very fine. If the natural mineral is of the desired degree of whiteness, which it rarely is in the United States, no treatment other than grinding is necessary; otherwise it may be bleached with sulphuric acid. Ground barite which is not pure white may be sold as ground barite "off color" or "unbleached," this grade is used for dark-colored paints. Ground barite of suitable color is used by the paper industry as a filler chiefly in the manufacture of heavy, stiff materials such as playing cards and Bristol board; it is known in the trade as "prime white" or "floated" barite, and is used as a pigment in white paints, or as a filler in paper, linoleum, rubber goods and artificial ivory, and for other purposes where a white, inert pigment or filler is desired. Among its minor uses may be mentioned its employment for X-ray protection, for which it is mixed with rubber to form the hard-rubber casing over the X-ray bulb; it is also introduced into a plaster applied to the walls and ceilings in X-ray rooms. Some ground barite is used in certain types of storage batteries, and as a flux in the smelting of brass. Several glass manufacturers are experimenting with ground barite in the making of glassware, particularly bottles for preserved fruit and vegetables. "Baroid," a special form of ground barium sulphate, is used to seal off gases in the drilling of oil wells and thus prevent "blow-offs."

Miscellaneous uses of barite include artificial marble, asbestos products, colors, (lakes), explosives, fireworks, insulating materials (X-ray), phonograph records, printers' ink, sealing wax, shade

cloth and other textiles, soap, tiles and ceramics, etc., and titanium pigments.

Barium chemicals are manufactured either direct from crude barite or from ground barite, which may be either barite, (barium sulphate), or witherite (barium carbonate). Among the more important chemicals are the following: Blanc fixe, or artificial barium sulphate, barium carbonate, barium chloride, barium nitrate, barium monoxide, barium hydroxide, barium dioxide (binoxide, or peroxide), barium sulphide, barium chromate, and barium chlorate.

In the United States barite is produced in three distinct localities: The middle Western district, represented by Missouri; the Southern district, represented by South Carolina, Georgia, Tennessee, and Kentucky; and California and Nevada.

The Middle Western Market is only partly supplied by the Missouri field, as the lithopone plants in this area, in particular, have received a portion of their supplies in recent years from producers in the Southern district. Along the Atlantic coast German imports of crude barite exert a powerful influence, and as a result the southern producers have been forced to seek an outlet for some of their product in the Middle West. Missouri producers, on the other hand, are shipping ground barite into the Eastern market; but in this field German competition, though confined to the seaboard area, is likewise severe.

The situation is further complicated because there are two grades of barite and because these two grades are interchangeable to only a limited extent. One grade produced in Missouri and Germany, is soft and hence easily ground; while the other, produced in the Southern district, is hard and crystalline. The soft grade is more suitable for the manufacture of ground barite used as a filler in the paint, paper, and rubber industries while the hard grade is used in the lithopone and barium chemical industries. German crude barite, being softer, has displaced Georgia barite as raw material for making ground barite in the eastern mills.

For the present the production of barite in the United States is limited only by the demand for it. California, Nevada, Georgia, Tennessee, and South Carolina, in particular, seem to contain large undeveloped deposits, and supplies from other domestic producing areas could probably be greatly increased if the market justified such expansion.

Detailed information may be secured from Circular 6221 issued by Bureau of Mines, Department of Commerce, Washington, D. C.

FINANCIAL NEWS

Bond Issues Proposed

Ala., Mobile—Road—Mobile County Bd. of Revenue plans \$400,000 bond election.

Ala., Birmingham—Courthouse—City, W. D. Bishop, Chmn., Bd. of Revenue, receives bids May 19 for \$250,000 of \$1,500,000 bonds previously voted.

Ark., Hampton—Bd. of Directors of Hampton Special School Dist., Calhoun County, R. N. Lyon, Pres., will sell May 1 at public auction \$26,000, 6% dist. bonds.

Fla., Miami Beach—City, C. W. Tomlinson, Clk., receives bids May 7 for \$1,743,000 bonds: \$900,000, golf course; \$698,000, street and sewer; \$145,000, bridge, water. 4-10

Fla., Pinellas Park—Pinellas Park Drainage Dist., P. J. McDevitt, Dist. Sec., receives bids May 1 for \$66,000, 6% funding bonds.

Ky., Morganfield—Road—Union County plans \$150,000 bond issue.

La., Amite—Tangipahoa Parish, Lickfaw and Antioch School Districts, vote May 22 on \$20,000 bonds; W. J. Dunn, Supt. of Schools.

La., Amite—Courthouse, Jail—Tangipahoa Parish Police Jury has canceled bond election for courthouse and jail; lately noted vote April 15. 4-10

La., Clinton—East Feliciana Parish School Bd., P. H. Dupuy, Supt., plans selling at private sale, \$40,000 Jackson School Dist. bonds; lately noted rejected bids. 4-17

La., Hammond—Bd. of Comms. of Tangipahoa Drainage Dist. No. 1, H. E. Carroll, Sec., receives bids April 30 for \$110,000, 5½% bonds.

La., Mount Herman—Washington Parish School Bd., Franklinton, called election for May 20 on \$15,000 bonds. 4-17

La., Rayville—Richland Parish School Bd. called election for May 13 on \$225,000 bonds for School Dist. No. 18; J. A. Ball, Pres. of Bd.

La., Shreveport—Caddo Parish School Bd., E. W. Jones, Supt., receives bids May 7 for \$100,000, \$1000 denom. not to exceed 5½% bonds.

La., Vivian—Vivian School Dist., Caddo Parish, voted \$150,000 bonds.

Mo., Cumberland—City, Samuel Wertheimer, Commr. of Finance and Revenue, receives bids April 28 for \$175,000, 4½%, \$1000 denom. bonds; \$100,000, water improvement bonds of 1929; \$75,000, water improvement bonds of 1924.

Miss., Ackerman—Water—Town votes April 28 on \$15,000 bonds.

Miss., Holly Springs—Road—Marshall County voted \$35,000 bonds for Road Dist. No. 1. 3-20

Miss., Holly Springs—Marshall County Bd. of Suprs., W. H. French, Pres., receives bids May 6 for \$10,000 Marshall County Agricultural High School bonds.

Miss., Jackson—Courthouse, Jail—Hinds County Bd. of Suprs., W. W. Downing, Clk., receives bids May 5 for \$200,000 Series C bonds.

Miss., Kosciusko—Attala County Bd. of Suprs., G. J. Thornton, Clk., receives bids May 5 for \$250,000, Separate Road Dist. bonds. 4-17

Miss., Liberty—Amite County Bd. of Suprs. called election for May 17 on \$9000 East Fork Consolidated School Dist. bonds.

Miss., McHenry—McHenry Consolidated School Dist. voted \$15,000 bonds.

Miss., Pittsboro—Road—Calhoun County votes May 1 on \$100,000 Suprs. Dist. No. 1 bonds.

Miss., Tupelo—Lee County Bd. of Suprs., Byron Long, Clk., receives bids May 5 for \$20,000 Verona Consolidated School Dist. bonds.

Miss., Walnut Grove—School—City voted \$60,000 bonds. 3-27, under Miss. Carthage.

Mo., Ava—Water—City, W. I. Parker, Clk., voted \$15,000 bonds. 4-3

Mo., Boonville—Palestine Special Road Dist., Cooper County voted \$50,000 bonds.

N. C., Marshall—Road—Madison County Comms. considering bond issue.

Okla., Dewey—City voted \$22,000 school bonds.

Okla., El Reno—School—City voted \$28,000 bonds.

Okla., Hooker—Water—City, August Lorenz, Mayor, receives bids April 28 for \$60,000, 6% bonds.

Okla., Hooker—Water—City voted \$60,000 bonds.

Okla., Perry—Hospital—City defeated \$40,000 bond issue.

Okla., Sayre—Sayre School Bd. called election on \$32,000 bonds.

Okla., Sayre—City defeated bond issue: \$28,500, library; \$33,000, river flood control; \$32,000, sewer; \$30,000, auditorium; \$105,000, water.

Okla., Stillwell—Courthouse—City votes on \$65,000 bonds.

Okla., Tipton—City voted \$20,000 bonds; \$15,000, sanitary sewer; \$5,000, water.

Okla., Tulsa—City, Dan W. Patton, Mayor, may receive bids April 25 for \$855,000 bonds, \$60,000, convention hall improvement; \$10,000, automatic signals; \$150,000, hospital uses; \$500,000 street and storm sewer; \$200,000 parks; K. R. Tels, City Engr.

S. C., Spartanburg—Spartanburg County Bd., J. L. M. Williams, Clk., receives bids May 1 for \$660,000, 4½%, \$1000 denom. general obligation bonds.

Tenn., Moscow—Fayette County Bd. of Education, M. A. Weber, Chmn., Hickory Withe, called election for May 3 on \$25,000 bonds.

Tex., Alamo Heights, San Antonio—Alamo Heights voted \$240,000 refunding warrants. 4-3

Tex., Dallas—City, John C. Harris, Finance Commr., plans offering for sale, during summer, \$2,500,000 bonds; \$1,500,000 Ulrickson program; \$1,000,000 sewer.

Tex., Fairfield—School Bd., W. A. Parker, Pres., probably receive bids soon for \$28,000, 5%, \$100 denom. Fairfield Independent School Dist. bonds. 4-3

Tex., Grapeland—City votes April 29 on \$45,000, not to exceed 6% bonds.

Tex., Lagrange—Road—Fayette County, Road Dist. No. 2, votes May 5 on \$110,000, not to exceed 5½% bonds.

Tex., Livingston—Street—City voted \$25,000 bonds.

Tex., Marfa—Presidio County voted bonds for \$1,200,000 road building.

Tex., Matador—City voted \$60,000 bonds; B. F. Tunnell, Clk., Bd. of School Trustees.

Tex., Mason—Mason Independent School Dist. probably vote soon on \$20,000 bonds.

Tex., Ozona—Road—Crockett County voted \$375,000 bonds. 3-27

Tex., Rio Grande—Starr County Water Control and Improvement Dist. No. 1, Lino Perez, Pres., received no bids for \$1,200,000, 6% water bonds. 3-27

Tex., Seabrook—School Bd., Seabrook Common School Dist. No. 13, W. M. Day, Sec. Treas., probably receive bids in 30 days for \$20,000, 5%, \$1,000 denom. bonds. 4-10

Tex., Spearman—Road—Hansford County plans issuing \$60,000 Road Dist. No. 1 bonds.

Tex., Taft—City voted \$135,000 bonds; \$105,000 paving; \$30,000 municipal building. 3-27

Va., North Tazewell—City votes May 10 on \$18,000 bonds; \$13,000, school; \$5,000, purchase fire fighting equipment.

Va., Winchester—City, L. R. Dettra, Mgr., receives bids May 9 for \$145,000 of \$500,000 bonds previously voted for school, sewer and streets. 3-27

W. Va., Beckley—Street—City votes May 21 on \$200,000 bonds.

Bond Issues Sold

Ala., Mobile—Public Improvement—City, Harry T. Hartwell, Mayor-Pres., sold \$58,000, 5% bonds to Assel, Goetz & Moerlein, Inc., Cincinnati, at \$58,100 and accrued interest. 4-2

N. C., Durham—City, C. B. Alston, Clk., sold \$100,000, 4½% bonds to Hanchett Bond Co., Inc., Chicago, and Title Guarantee Securities Corp. at \$1030 premium. 4-3

N. C., High Point—City, Edward M. Knox, Mgr., sold \$1,500,000, 5% water and sewer bonds to Caldwell & Co., Nashville, at par, accrued interest and \$2500 premium. 4-3

N. C., Mount Airy—School—City sold \$50,000, 5½% bonds to Seipp, Princell & Co., Chicago, at \$1,780 premium.

N. C., Williamston—Martin County Comms., J. S. Getzinger, Clk., sold \$75,000, 5½% tax anticipation notes to Eyer & Co., New York, at par. 3-20

N. C., Wilmington—New Hanover County Comms. sold \$625,000, 4½% bonds to Darby & Co., New York, at \$7,625 premium; \$25,000, county funding; \$242,000, school funding; \$355,000, school buildings. 4-3

Okla., El Reno—School Bd. sold \$28,000, 5% bonds to L. C. Gadberry, Treas. of School Dist., at par and accrued interest.

Tenn., Loudon—Water, Sewer—City sold bonds to Joseph, Hutton & Estes, Inc., Nashville.

Tex., Columbus—Colorado County Comms. sold \$425,000 Road Dist. No. 3 bonds to Garrett & Co., Dallas.

Tex., Houston—Harris County Comms., Norman Atkinson, County Judge, sold \$3,500,000 bonds to syndicate composed of Guaranty Co. of New York, Bankers Co. of New York, Eldredge & Co., Hannaha, Ballin & Lee, all New York; First Detroit Co., Detroit; Estabrook & Co., First National Old Colony Corp., both Boston; Ames, Emerich & Co., Inc., Chicago; First Milwaukee Co., Milwaukee; Carr, Moroney & Co., Second National Bank, both Houston; \$2,000,000, 5%, navigation, at 101.861; \$1,500,000, 4½%, road, at 101.17. 4-10

Tex., Pasadena—City, G. W. Conrad, Mayor, sold \$120,000 6% bonds to H. C. Burt & Co., Houston, at par; \$58,000, water; \$45,000, sewer; \$5,000, fire station; \$12,000, refunding. 3-27

Tex., Wharton—Wharton County, John Norris, County Judge, sold \$270,000 bonds: \$220,000 Special road bonds to Mercantile Commerce Co., St. Louis, Mo., at par, accrued interest and \$9000 premium; \$50,000, Road Dist. No. 5 bonds to Hall & Hall, Temple, at par, accrued interest and premium.

New Financial Corporations

Ky., Hopkinsville—City Bank and Trust Co., W. T. Tandy, Pres., opened, having purchased assets, etc., of Bank of Hopkinsville; total assets about \$5,000,000.

La., New Orleans—Shannon Securities Corp., capital \$20,000, chartered; D. G. Edrington, 1409 Octavia St.

La., New Orleans—American Mortgage Corp., capital \$100,000, chartered; John Legier, American Bank Bldg.

Miss., Indianola—Sunflower Bank, \$50,000 capital, organized; L. Gaston, Pres.

Miss., Osyka—First National Bank of Osyka, capital \$25,000, organizing; Roy S. Funchess, correspondent.

Miss., Scooba—J. D. Wallace, M. W. Latham, A. A. Hammack, interested in organizing state bank with \$25,000 capital.

Mo., Kansas City—Jackson-Jensen Investment Co., capital \$20,000, chartered; Richard C. Jensen, Scarvitt Bldg.

Mo., Kansas City—Son-Will Corporation, capital \$50,000, chartered; John M. Wilson, Director, 1511 Metropolitan St.

Mo., St. Louis—Northwestern Securities Corporation, capital \$700,000, chartered; Charles Maull, 336 Woodlawn St.

Mo., St. Louis—Franklin-American Trust Co., capital \$2,600,000, formed by consolidation of Franklin-American Trust Co., Jas. L. Ford, Jr., Pres., and National City Bank, B. F. Edwards, Pres.; total resources over \$45,000,000.

N. C., Wilmington—Atlantic Finance Co., capital \$100,000, chartered; John Bright Hill, Southern Bldg., Wilmington; W. L. Hill, Warsaw.

Okla., Oilton—Oilton Community Bank, \$15,000 capital, chartered; P. L. Trout, M. D. Butler, Everett Jackson. 4-17

Tenn., Chattanooga—Foundation Trust Co., capital \$100,000, chartered; R. H. Kimball, 149 E. Terrace St.

Tenn., Nashville—Middle Tennessee Bank, being organized by J. L. Hutton, liquidation agent for closed Columbia Bank & Trust Co., as President, and H. L. Grigsby, State Supt. of Banks; Van Shapard, Cashier; will take over assets of defunct Columbia Bank & Trust Co.

Tex., Jefferson—Commercial National Bank in Jefferson, capital \$25,000, chartered; T. D. Rowell, Pres.; W. T. Neilson, Cashier.

Tex., Merkel—Farmers State Bank, capital \$40,000, reorganized; C. M. Largent, Pres.; W. L. Diltz, Jr., Cashier.

First National Bank, John M. Monohan, Pres., Louisville, Ky., opened branch at Eighteenth and Hill St., April 19, to be known as Dixie Highway Branch.

Greensboro Bank & Trust Co., B. B. Vinson, Pres., Greensboro, N. C., will open branch bank, May 1, in Piedmont Bldg., North Elm St., with Waldo Porter, V.-P. of bank, in charge; bank will inaugurate personal loan dept. about May 1.

This Fascinating Game Called Business!

If there is one inspiring element, more noticeable than another in present-day Business, which lifts it to a more human plane, it is the element of Sport! Not sport as a recreation, diversion or pastime, but sport as a Game. The human game of building men and things to the *service* of man.

Ask any successful business man the game he likes best. Invariably the answer is, "My business." He is *playing the Game*. No little white ball holds his eye so intently; no gun or rod, blue water or trackless sky, call to him so deeply, mentally or physically. The records he breaks are those set by his Budget:—Costs, Sales, Inventory, Turnover. His medals—profits, and the knowledge he has played the game *well*.

It's a Great *Game*—Business! Some weaken, but The Game goes on. Modern Accountancy equips this Business Game, holds the stop-watch of accomplishment and sets the goal ever higher.'

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Financial Notes

General Electric Company Report.

The thirty-eighth annual report of the General Electric Company, Schenectady, N. Y., and the eleventh annual report of the International General Electric Company, Inc., with offices in New York City, have been issued by the former. Net sales of the General Electric Company billed in 1929 amounted to \$415,338,094, as compared with \$337,189,422 for 1928, and net income from sales in 1929 to \$49,395,896, as against \$39,061,230 for 1928. Income from all other sources reached a total of \$21,426,079 in 1929, as compared with \$17,671,201 for 1928, making a total income for 1929 of \$70,821,976 and for 1928 of \$57,332,432. The surplus for 1929 amounted to \$25,054,826, as compared with \$8,313,494 for 1928.

Net income from selling operations of the International General Electric Company, Inc., amounted to \$1,050,731 for 1929, as compared with \$1,191,255 for 1928, while sundry income reached a total of \$4,159,319 in 1929, as against \$3,323,028 for 1928. Profits available for dividends amounted to \$1,708,064 in 1929, as compared with \$1,681,735 for 1928, and the surplus for the last year was \$208,064, as compared with \$181,735 for 1928.

Operating Income Increased 32 Per Cent.

The total operating income of the Atlantic Coast Line Railroad Company increased 32 per cent last year, according to the ninety-sixth annual report of the company for the year ended December 31, 1929. Operating revenues increased 1.37 per cent, while operating expenses decreased 4.53 per cent. The company's operating revenues for 1929 amounted to \$72,371,894, as compared with \$71,393,174 for 1928, while net operating revenues amounted to \$18,940,305 in 1929, as against \$15,497,115 for 1928. Operating expenses in 1929 reached a total of \$53,431,588, as compared with \$55,966,058 for 1928. Gross income amounted to \$19,940,497 in 1929, as compared with \$16,304,954 for 1928, and net income to \$9,451,226 for 1929, as compared with \$5,973,323 for 1928. The company operated 5,154 miles as of December 31, 1929, as against 5,143 miles as of December 31, 1928.

Central of Georgia Railway Report.

Operating revenues of the Central of Georgia Railway Company for 1929 amounted to \$25,033,991, according to the thirty-fifth annual report of the company for the year ended December 31, 1929. These figures compare with \$25,132,966 for 1928. Railway operating expenses for 1929 amounted to \$19,134,891, as compared with \$19,208,786 for 1928, leaving a net revenue from railway operations of \$5,899,189 for 1929, as against \$5,924,179 for 1928. Deducting railway tax accruals and uncollectible railway revenue, the railway operating income for 1929 was \$4,359,727, as compared with \$4,405,519 for 1928. Income balance transferred to the credit of profit and loss amounted to \$1,758,044 in 1929, an increase of \$45,852 over 1928.

Equitable Trust Company Changes.

John Y. Robbins has resigned as vice-president of the Equitable Trust Company of New York to succeed Ross Beason as president of the Administrative and Research Corporation which, through its subsidiaries, sponsors Corporate Trust Shares and Basic Industry Shares, both of which are fixed trusts. Mr. Beason will assume the position of chairman.

Officers of Morris Plan Bank.

Philip Woolcott, vice-president of the Morris Plan Bank of Virginia, Richmond, has been elected senior vice-president of the bank, according to President Thomas C. Boushall. L. H. Zehmer, cashier of the Newport News branch, was elected vice-president and cashier of the Norfolk branch to succeed E. N. Plack, who was promoted to vice-president, and E. N. Islin, assistant cashier of the Newport News branch, was made cashier of that branch.

H. M. Bylesby and Company Report.

According to the annual report of H. M. Bylesby and Company, Chicago, Ill., for the year ended December 31, 1929, the total net income of the company for the year was \$16,791,255. After deducting \$2,329,310 for cash dividends and cash distribution under a profit-sharing plan, and \$4,420,965 for stock dividends and stock distribution under a profit-sharing plan, there was a surplus for the year of \$10,040,980. This added to a surplus at the beginning of the year of \$9,604,773 brought the total surplus as of December 31, 1929, to \$19,645,753.

International Cement Corporation Report.

According to the eleventh annual report of the International Cement Corporation, New York, and its subsidiaries, for the year ended December 31, 1929, sales amounted to \$28,370,031 after deductions for discounts and allowances, as compared with \$27,595,096 for the year 1928. Net income for the year carried to the surplus account amounted to \$4,950,433 and this added to a balance of \$11,982,485, as of December 31, 1928, made a total of \$16,932,918. After the deduction of \$2,486,336 for dividends and \$775,725 for other items, the surplus carried to the balance sheet was \$13,670,835.

Georgia Power Company Report.

According to the annual report for 1929 of the Georgia Power Company, Atlanta, and its subsidiaries, total gross earnings from operations amounted to \$23,372,923, as compared with total gross earnings for 1928 of \$22,856,437. Total operating expenses for 1929, including maintenance, taxes and interest on equipment trust obligations, amounted to \$11,326,287, as against \$11,056,199 for 1928, leaving net earnings from operations of \$12,046,636 for 1929, as compared with \$11,800,237 for 1928. The net income for 1929 was \$7,232,775 as compared with \$6,634,814 for 1928, and the balance, after certain deductions, was \$2,547,725 for 1929 as against \$1,989,774 for 1928.

Air Cooling for Railroad Cars

Cumberland, Md.—The first railroad passenger car to manufacture its own weather was recently demonstrated by the Baltimore and Ohio Railroad and the Carrier Engineering Corporation of Newark, N. J., in the running of a diner in a regular train between Baltimore and this city. A test conducted by Colonel George H. Emerson, chief of motive power and equipment, demonstrated that with full winter heating capacity of the car turned on, intensified by heat from the kitchen and warm outdoor weather, the new system reduced the temperature 23 degrees in 20 minutes. The air is purified by mechanical filtration or washing and the temperature lowered

by passing it over cooling coils. It is then distributed throughout the dining compartment of the car by a system of overhead insulated ducts. Automatic control may be set by any one in charge of the car or train in accord with requirements. Rubber insulation of the car and system permit full operation of the system without noise or vibration, it is said. Predictions are that the system will not only be used for dining cars, but for coaches and sleepers as well.

PROPOSALS

Bids close May 16, 1930.

U. S. Engineer Office, P. O. Box 687, Vicksburg, Mississippi. Sealed bids will be received at this office until 11 o'clock a. m. May 16, 1930, and then opened for constructing about 4,385,000 cubic yards of levee work on the Arkansas River in Arkansas and 10,400,000 cubic yards of levee work on Mississippi River in Mississippi, Arkansas and Louisiana.

Bids close May 13, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., April 15, 1930.—SEALED PROPOSALS will be opened in this office at 3 P. M., May 13, 1930, for furnishing all labor and material and performing all work necessary for the installation of two freight elevators in the U. S. Post Office at Passaic, N. J. The successful bidder will be required to furnish a performance bond of 50% of the contract price. Drawings and specifications may be obtained from this office. JAS. A. WETMORE, Acting Supervising Architect.

Bids close May 12, 1930.

\$1,350,000 Bonds

St. Petersburg, Fla. PUBLIC NOTICE IS HEREBY GIVEN that sealed bids will be received by the Director of Finance of the City of St. Petersburg, Florida, at the City Hall in St. Petersburg until 4 P. M. MAY 12, 1930, for the purchase of the following bonds of said city:

An Issue of \$350,000.00 CITY OF ST. PETERSBURG Refunding Bonds dated May 1, 1930, 6% interest, \$1000.00 each, maturing as follows: \$14,000.00 1st May each year from 1933 to 1954, inclusive, and \$42,000.00 1st May, 1955, both principal and interest payable at the Equitable Trust Co., New York City, issued for the purpose of refunding principal ONLY of certain improvement bonds heretofore issued by the City of St. Petersburg in payment for improvements within said city which will mature May 1, June 1 and July 1 and 15, 1930.

Authorized by resolution of City Commission March 24, 1930, pursuant to Chapter No. 11,855 of Acts of Legislature of 1927. \$1,000,000.00 or any part thereof of an issue of \$2,357,000.00 City of St. Petersburg Bonds

Issued for the purpose of making payment of the principal and interest accrued to July 1, 1929, on certain assessments imposed by the City of St. Petersburg against certain of the property of the said city, and for the purpose of the payment of the principal and interest accrued to July 1, 1929, on obligations assumed by the city, and for the purpose of the payment of the principal and interest to accrue to July 1, 1929, on assessments imposed by the city against property of street railways, \$1000.00 each, 5½% interest, dated July 1, 1929, due July 1, 1959, principal and interest payable at the Equitable Trust Co. in New York, ratified by the voters at an election held May 23, 1929, and ratified by the Legislature of Florida, 1929.

Bids must be accompanied by a genuine certified check for 2% of the amount of the bid, payable to the City of St. Petersburg, as evidence of good faith on the part of the bidder.

The City of St. Petersburg has never defaulted in the payment of either principal or interest.

H. T. DAVIS, Director of Finance,

Additional Proposals on Pages 101-102

★
★
★
A Declaration of
INDEPENDENCE
by the oldest BANK in
the UNITED STATES



The independent character of this bank dates back to its founding in 1784 when Alexander Hamilton wrote its Constitution.

AN OPEN STATEMENT of POLICY
by THE TRUSTEES of THE BANK
of NEW YORK and TRUST COMPANY

IN view of the many changes that have taken place in the banking field during the past year, and firmly convinced that the interests of its customers and future customers can be best secured by the preservation of the independent position of the bank, the trustees feel that the following outline of its policy will be of particular interest at this time

BOARD OF TRUSTEES

JOSEPH ANDREWS
EDMUND L. BAYLIES
JOSEPH H. CHOATE, JR.
HENRY D. COOPER
LINCOLN CROMWELL
WM. M. CRUIKSHANK
NORMAN H. DAVIS
THOMAS DENNY
CLEVELAND E. DODGE
PHILIP T. DODGE
JOHN FOSTER DULLES
EDWARD J. HANCY
ROBERT C. HILL
EUSTIS L. HOPKINS
COLUMBUS O'D. ISELIN
L. F. KIESEWETTER
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ALFRED E. MARLING
WILLIAM J. MATHESON
EDWIN G. MERRILL
LEWIS SPENCER MORRIS
RAY MORRIS
FRANK C. MUNSON
HENRY PARISH
WALTER WOOD PARSONS
W. EMLIN ROOSEVELT
EDWARD M. TOWNSEND
HOWARD TOWNSEND
PAUL TUCKERMAN
ALLEN WARDWELL

THAT the Bank of New York and Trust Company must preserve its independent position and that the historic continuity of what is now the oldest bank in America, retaining its original name and the first financial institution in America to use "Trust Company" as part of its title, must remain unbroken.

THAT there is a real place in New York for conservatively managed banks and trust companies of moderate size where customers, both in the Banking and Trust Departments, may have easy access to and personal acquaintance with the senior officers.

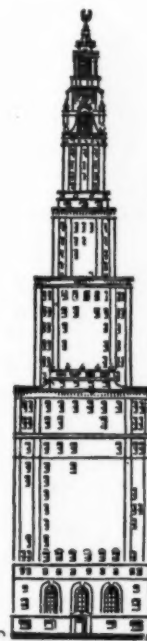
THAT the Capital and Surplus of the Bank of New York and Trust Company, when considered in relation to its responsibilities, rank the institution among the strongest in the country and that it is entirely adequate to take care of the requirements of the great majority of wealthy corporations, firms and individuals.

THAT its Trust Department—continuously operated for more

than one hundred years by the New York Life Insurance and Trust Company and the Bank of New York and Trust Company—is completely equipped to care for the largest estates and trusts as well as for those of moderate size and that its record for administration of fiduciary trusts of all kinds entitles it to rank among the leaders.

THAT the fact that the company is not a distributor of securities, either directly or through an affiliated company is of distinct advantage to its customers and to all those interested in its trust funds, as its advice and information concerning investments are entirely impartial.

THAT the Company's unique Charter, under which Trustees are elected for life or "good behavior" with power to fill vacancies in the Board as they occur, affords a guaranty of continuity of management that is of inestimable value to the creators of trusts, some of which are intended to continue far into the future.



48 Wall Street

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CAPITAL, SURPLUS AND UNDIVIDED PROFITS \$20,000,000

48 WALL STREET, NEW YORK

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MEMBERSHIP
NUMBER ONE

HERE YOU FIND**COOPERATION and CONSERVATISM**

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borrowers and depositors, and
may be called the keystone of
our success.

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GWYNN CROWTHER, President

26 South Street, Baltimore, Md.

Capital and Surplus \$1,350,000.00

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MUNICIPAL NOTES

COMMERCIAL PAPER

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BALTIMORE, MD.

Excerpts from the Ninety-Sixth Annual Report of ATLANTIC COAST LINE RAILROAD COMPANY

Richmond, Va., April 15, 1930.

To the Stockholders of the

Atlantic Coast Line Railroad Company:

The Board of Directors of the Atlantic Coast Line Railroad Company respectfully submits the following report for the year ended December 31, 1929:

INCOME ACCOUNT		
	1929.	1928.
Operating revenues	\$72,371,894.14	\$71,393,174.35
Operating expenses	53,431,588.81	55,966,058.85
Net operating revenues	\$18,940,305.33	\$15,427,115.50
Railway tax accruals	6,240,000.00	5,800,000.00
Net operating revenues, less taxes	\$12,700,305.33	\$9,627,115.50
Uncollectible railway revenue	45,793.07	40,686.49
Total operating income	\$12,746,098.40	\$9,667,801.99
Non-operating income	7,285,985.22	6,718,505.41
Gross income	\$19,940,497.48	\$16,386,307.40
Dividends declared from non-operating income	2,470,281.00	2,470,281.00
Interest and rentals	\$17,470,216.48	\$13,834,673.42
Miscellaneous deductions from income	\$10,626,629.03	\$8,881,434.25
Net income	\$9,451,226.14	\$5,973,323.19

INTEREST AND RENTALS		
	1929.	1928.
Interest on funded debt	\$6,322,207.00	\$6,329,673.67
Interest on certificates of indebtedness	5,404.00	5,404.00
Interest on equipment trust notes of January 15, 1920	154,171.25	179,689.25
Dividend on equipment trust certificates of February 1, 1921	138,125.00	137,625.00
Dividend on equipment trust certificates of February 1, 1920	141,104.20	108,371.25
Rentals	82,576.00	82,476.00
	\$6,843,587.45	\$6,953,239.17

DIVIDENDS.		
Dividends were declared as follows during the year:		
To Preferred Stockholders, 5 per cent		\$9,835.00
To Common Stockholders, 7 per cent	\$5,763,989.00	
To Common Stockholders, 3 per cent, extra from non-operating income	2,470,281.00	
Total amount of dividends to Common Stockholders, 10 per cent	\$8,234,270.00	

OPERATING REVENUES		
	1929.	1928.
Freight	\$53,188,638.62	\$52,019,282.94
Passenger	12,132,622.53	13,065,377.43
Excess baggage	89,664.17	98,480.59
Mail	1,773,380.71	1,617,119.65
Express	2,627,742.33	2,309,710.94
All other transportation	708,482.77	573,681.01
Incidental and joint facility	1,851,362.77	1,709,521.58
Total	\$72,371,894.14	\$71,393,174.35

OPERATING EXPENSES AND TAXES		
	1929.	1928.
Maintenance of way and structures	\$10,181,058.53	\$10,935,259.70
Maintenance of equipment	13,874,060.31	14,812,872.84
Traffic	9,981,844.84	2,125,844.50
Transportation	24,687,139.99	25,403,746.44
Miscellaneous operations	654,564.10	627,681.74
General Expenses	2,095,193.28	2,100,248.09
Transportation for investment—		
Credit	32,272.34	39,595.06
Total	\$53,431,588.81	\$55,966,058.85
Railway tax accruals	6,240,000.00	5,800,000.00
Total	\$59,671,588.81	\$61,766,058.85

GENERAL REMARKS

Railway Operating Revenues of your Company for the year 1929 were \$72,371,894.14, an increase of \$9,978,719.79, or 1.37 per cent., over that of the previous year. The said Operating Revenues do not include back mail pay for period from May 9, 1925, to July 31, 1928, amounting to \$737,815.34, which was credited to Profit and Loss. The Income Balance Transferred to Profit and Loss, December 31, 1929, after the payment of \$2,470,281, as extra dividends, aggregating 3 per cent. on Common Stock, deducted from non-operating income, was \$9,332,457.27. Compared with \$5,919,730.33, transferred to Profit and Loss on December 31, 1928, this shows an increase of \$3,412,726.94, or 57.65%. With the exception of a record citrus fruit crop in Florida (season of 1928-1929), the year was one of sub-normal business conditions in the country traversed by your lines.

Operating Expenses for the year 1929 amounted to \$53,431,588.81, a decrease of \$2,534,470.04, or 4.53 per cent., from the previous year. Economies were effected in every department of your Company's operations and will be continued wherever found to be practicable and consistent with safety and superior service. Payrolls decreased \$1,280,329.25 (3.73%) from the previous year.

1929-1930 Fruit Crops: Due to the campaign to destroy the Fruit Fly, to a poor bloom, to heavy rains in August and September, and to a severe rain and wind storm, accompanied by cold weather, in South Florida in September, the citrus crop for the season of 1929-1930 is estimated to be only about 14,000,000 boxes. A large amount of early vegetable planting was destroyed by the rains and storm, but replanting was promptly effected so that the vegetable movement, it is estimated, will be in excess of the previous season.

Flood Damage, Georgia-South Carolina: In late September and early October, 1929, continuous heavy rains, with consequent high water in the rivers and streams of South Carolina and Georgia, seriously interrupted the operation of your lines in that territory, as well as those of affiliated and connecting lines. The Savannah River, at Augusta, Georgia, rose forty-seven feet on gauge, seriously damaging the bridge of the Charleston & Western Carolina Railway, and other facilities used jointly by your Company at and near Augusta, Georgia.

New Construction: The line in Florida, from Clewiston, on the Southern shore of Lake Okechobee, to Lake Harbor, at the Southeast corner of Lake Okechobee, a distance of 3.58 miles, referred to in last year's report, was completed and placed in operation during the year. This line serves the sugar cane activities of the Southern Sugar Company and connects at Lake Harbor with the Lake Okechobee Extension of the Florida East Coast Railway.

In December, 1929, application was made to the Interstate Commerce Commission for authority to construct a branch line in Polk County, Florida, from near Medulla to near Ridgewood, a distance of 7.00 miles. On January 16, 1930, the Commission authorized construction of said line, and work is now progressing. The line will serve

plants of the Southern Phosphate Corporation and should produce substantial tonnage. Upon the line completed in 1928 between Immokalee and Everglades, Florida, there have been planted about 3,500 acres of tomatoes.

Bonds Certified: During the years 1928 and 1929 two separate applications were filed with the Interstate Commerce Commission for authority to certify and place in your Treasury General United Mortgage Series "A" 4% Bonds to reimburse your Company for expenditures made by it for additions and betterments to road and equipment during the years ended December 31, 1927, and December 31, 1928, and the payment at maturity, November 1, 1928, of the \$2,800,000 First Mortgage 5% Bonds of The Alabama Midland Railway Company assumed by your Company in 1902. Under order of the Commission dated January 26, 1929, \$3,724,000 were authorized, and under order of the Commission, dated November 12, 1929, \$5,927,000 were authorized, aggregating \$9,651,000 of bonds, which were duly certified by the Trustees and are now held in your Company's treasury.

Fruit Growers Express Company: In April, 1920, your Company, with certain other carriers, participated in the organization and subscription to the capital stock of Fruit Growers Express Company. Your Company subscribed for 25.50% of the stock and contracted with Fruit Growers Express Company to supply your Company with necessary refrigerator cars, equipment, facilities and service for movement of perishable freight traffic under refrigeration. The Fruit Growers Express Company acquired all of the equipment, property and operations of the Fruit Growers Express, Inc., and to secure the payment therefor executed a car trust agreement and bill of sale, dated April 24, 1920, under which it agreed to pay a total of \$6,757,868 in equal annual installments, each May 1, 1920 to 1929. The payments were guaranteed by the carriers participating in the organization and ownership of the capital stock of the Fruit Growers Express Company. Fruit Growers Express Company, from its own funds, made payment of full amount due under the bill of sale, payment of final balance having been made November 1, 1924, and it also paid, as matured, installments provided for in the car trust agreement, final installment being paid on May 1, 1929, the sum of \$6,757,868, not being required to furnish any part of the funds needed to make such payments.

Refrigeration Rates: On February 12, 1929, the Interstate Commerce Commission issued an order, Docket No. 17939, which required all carriers in Southern and Official classification territories to file certain reduced rates, effective April 15, 1929, for transportation of refrigerated shipments of perishable freight such as fruits, vegetables, berries and melons from Florida, Georgia, South and North Carolina and Virginia, to Eastern and New England territories. The reduction was based upon the Commission's finding that the tariff rates for standard refrigeration (or furnishing ice in bunkers of cars carrying perishables) were unreasonably high. While the tariff rates for icing refrigerator cars are filed and published by the railroads, the service is performed by Fruit Growers Express Company under contracts with the railroads and the charges for such icing service are paid over to the Fruit Growers Express Company. Your Company joined with other carriers in bringing suit to enjoin the Commission from enforcing its order to file the reduced rates, but the injunction was denied by a three-judge Federal Court sitting in the Eastern District of Virginia. The case is still pending in the United States District Court, awaiting the result of a rehearing which is now progressing before the Interstate Commerce Commission. In the meantime, the rates prescribed by the Commission have, since May 15, 1929, been in effect, and it is estimated that the loss in revenue to the Fruit Growers Express Company, due to the revised rates, based upon the operations from May 15 to December 31, 1929, will amount to approximately \$350,000 annually. At the present time your Company owns 22.84 per cent. of the capital stock of the Fruit Growers Express Company.

Purchase of Stock and Lease of Property of Charleston & Western Carolina Railway Company: As stated in annual report for 1924, your Company, jointly with Louisville & Nashville Railroad Company, leases the properties of Carolina, Clinchfield & Ohio Railway and its affiliated corporations for 99 years from May 11, 1923, the railroad lines being operated by the Lessees under a separate organization known as "Clinchfield Railroad Company." The leased railroad lines do not, however, have direct physical connection with the tracks of your Company. The Charleston & Western Carolina Railway connects with the Clinchfield Railroad at Spartanburg, South Carolina, and interchanges traffic with your Company at Yemassee and Robbins, South Carolina. Your Company has since December 1, 1929, operated under trackage rights over the line of the Charleston & Western Carolina Railway from Robbins, South Carolina, to Augusta, Georgia, 28.39 miles. Your Company, for more than thirty years, has been closely affiliated with the Charleston & Western Carolina Railway Company in management and operation, by reason of the ownership of the entire outstanding capital stock of Charleston & Western Carolina Railway Company by The Atlantic Coast Line Company.

The lines owned by Charleston & Western Carolina Railway Company are as follows:	
	Miles
Spartanburg, S. C. to Augusta, Ga.	133.57
Augusta, Ga. to Port Royal, S. C.	112.76
Laurens to Greenville, S. C.	36.34
McCormick to Anderson, S. C.	58.23
Total	340.89

The Charleston & Western Carolina Railway Company also operates over 1.61 miles under trackage rights in Augusta, Georgia.

In order to simplify operations by including the Charleston & Western Carolina Railway as an integral part of your railroad, and to further the best interest of your Company and the development of the Charleston & Western Carolina Railway in connection with the leasehold interest in the Clinchfield properties, it was deemed desirable that your Company acquire title, by lease, to the property of the Charleston & Western Carolina Railway Company, and to operate same as an integral part of its lines, thereby establishing direct physical connections with the jointly leased Properties known as the Clinchfield Railroad. The Atlantic Coast Line Company has agreed, after payment to it of a cash dividend by the Charleston & Western Carolina Railway Company, to sell to the Atlantic Coast Line Railroad Company at \$150 per share, the 12,000 shares of capital stock of the Charleston & Western Carolina Railway Company issued and outstanding, the sale to be subject to the approval of the Interstate Commerce Commission, and your Company has contracted with the Charleston & Western Carolina Railway Company that subject to approval by Interstate Commerce Commission, it will lease for a term of 99 years from January 1, 1930, the property, rights and franchises of the Charleston & Western Carolina Railway Company, except its rights to be a corporation and its franchises necessary to the performance of its obligations under the lease. Applications were duly filed and are now pending before the Interstate Commerce Commission for authority to your Company to lease the property of the Charleston & Western Carolina Railway Company and to purchase its capital stock.

By the terms of the proposed lease, your Company will agree to pay as rental for the property

All taxes assessed against Charleston & Western Carolina Railway Company and its property;

Interest on all bonds outstanding January 1, 1930, or issued after that date; \$12,000 per annum for corporate expenses of Charleston & Western Carolina Railway Company; and

Dividend at rate of 8 per cent. per annum on outstanding stock of Charleston & Western Carolina Railway Company not owned by or held for your Company.

Valuation: During the year full presentation by brief and oral argument of your Company's protest of the tentative value placed upon its property used in transportation services as of June 30, 1917, as found by the Bureau of Valuation of the Interstate Commerce Commission, was completed, but the Commission has not yet issued order covering its findings of final value.

The Board of Directors acknowledges its appreciation of the support by the patrons of the Company and of the services of its officers and employees.

H. WALTERS, Chairman. GEO. B. ELLIOTT, President.

SOUTHERN TEXTILE SECURITIES

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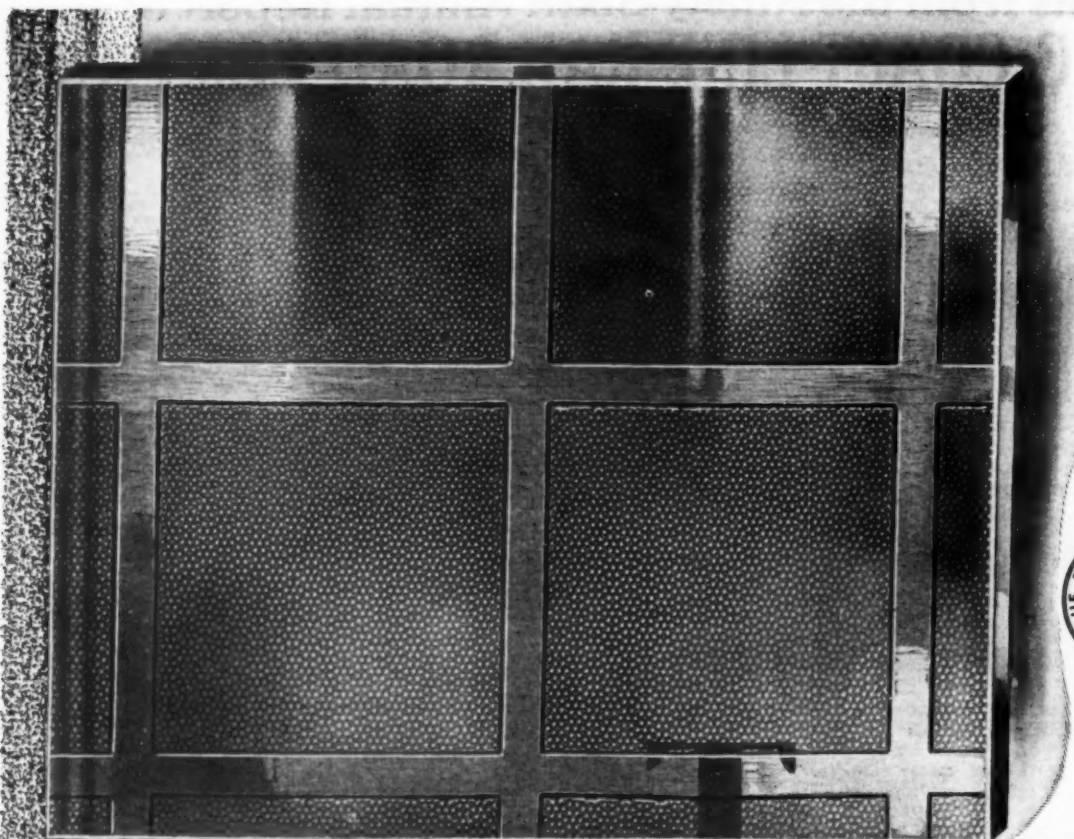
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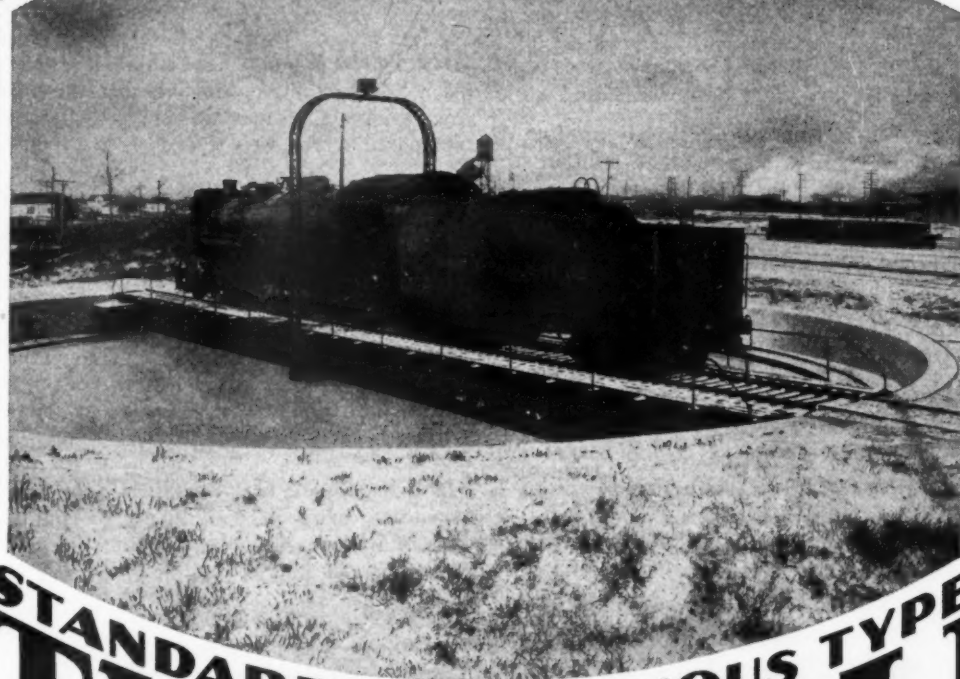
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A VERY practical improvement upon separate 4" x 4" lights of glass joined by metal bars is offered in Transex. It is a sheet of diffusing glass divided into 3 1/4" squares by a pattern of plain lines 3/8" wide. It resembles closely tiles set in metal, with obvious advantages of economy, strength and cleanliness. Designed primarily for store front transoms, it finds frequent use elsewhere to relieve the severity of large expanses of obscured glass.

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GLASS CORPORATION**
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AMERICAN BRIDGE COMPANY



STANDARD CONTINUOUS TYPE TURNTABLES



—Consist of a pair of shallow deck plate girders rigidly braced together and supported by the center and circle rail so that they act as a continuous structure on three supports; a wheel at each end of the table is driven along the circular rail by a suitable motor and gearing, making the table a self contained machine. These tables are proportioned for typical engines appropriate for each length and selected to provide large center sections.

Some of the important advantages of the continuous type of turntable are: Much longer locomotives can be turned on a table of given length and no time is lost in balancing them; separate tractors and latches are not needed; the horizontal rigidity of the continuous structure insures correct alignment of the table and approach rails; the pits are shallow and readily drained; the cost of pit construction and the cost of maintenance of the pit and table are less than for the cantilever type.

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Chicago, Ill.: Duluth, Minn.; St. Louis, Mo.; Minneapolis, Minn.; Denver, Colo.; Salt Lake City, Utah

Pacific Coast Distributors—United States Steel Products Co. Columbia Department: San Francisco, Portland, Seattle, Los Angeles, Honolulu

Export Distributors—United States Steel Products Co., 30 Church St., New York, N. Y.

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Could you give to your business associates, or to investors seeking information about the resources and development of the South an answer to every one of these questions?

DO YOU KNOW the area in square miles of your state and of every other Southern state?

DO YOU KNOW the agricultural production of your state and of every other Southern state?

DO YOU KNOW the total production in bushels of corn, wheat, oats and other grains in your state and in other Southern states?

DO YOU KNOW the production of cotton by states from year to year?

DO YOU KNOW the number of spindles and looms in each Southern state as compared with the number in former years?

DO YOU KNOW the consumption of cotton by each Southern state for a period of years as compared with the consumption of cotton in other parts of the country?

DO YOU KNOW the banking capital of each Southern state, the amount of individual deposits, and how these figures over a period of years compare with the past and with the total for the United States?

DO YOU KNOW the extent of industrial development in each Southern state as compared with former years, state by state?

DO YOU KNOW the number of livestock in each Southern state, and whether this number is increasing or decreasing, and to what extent as compared with past years?

DO YOU KNOW the extent of manufacturing development, capital invested, value of the product in each Southern state and how the output of manufactures compares with the total output or value of agricultural products?

DO YOU KNOW whether the value of the mineral products of the South is more or less than the total value of the mineral products of the entire United States in 1900?

DO YOU KNOW whether the South is spending more or less money on public school education than the whole country spent for similar purposes in 1910?

DO YOU KNOW the name of every city in the South that has a population of over 10,000, and what is the rate of growth as compared with former years?

DO YOU KNOW a thousand and one other things about the South which you are likely to need to know at any time?

ANSWERS to these and a thousand other questions are found in the

1930 BLUE BOOK OF SOUTHERN PROGRESS

It is an encyclopedia of information about the South—present, past and to come. No intelligent man or woman in the South should be unable to answer every one of these questions, or not know exactly where an answer can be found, and the BLUE BOOK is the only source of information which in compact form answers these questions in such a way that every reader can instantly turn to the right answer.

It is likewise true that no Northern man or woman who aims to be interested intellectually, financially or otherwise in the South should be without the BLUE BOOK as an ever ready, handy encyclopedia.

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BALTIMORE, Md.

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The 1930 edition of the BLUE BOOK is now going through the press. It will be ready for distribution about the first of May. Single copies are sold at 50c each. For bulk orders of 500 to 1000 the price is 40c each, and 30c a copy each for lots of over 1000. Orders for single copies to save bookkeeping must be sent with check or postal order.



PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close May 5, 1930.

\$200,000 Court House and Jail Bonds, Series "C"

HINDS COUNTY, MISSISSIPPI

Jackson, Miss.

NOTICE IS HEREBY GIVEN that sealed bids will be received at Jackson, Mississippi, by the Board of Supervisors of Hinds County, Mississippi, up to and including 10 o'clock A. M.

MAY 5TH, 1930.

for the purchase of any or all of \$200,000, Series "C" Court House and Jail bonds of Hinds County, Mississippi, authorized by election of May 4th, 1929; said bonds to be dated July 1st, 1929; to be numbered from 1 to 200, each inclusive, and to mature serially in numerical order, \$4000 thereof on the 1st day of July in each year from 1930 to 1934, each inclusive; \$8000 thereof on the 1st day of July in each year from 1935 to 1944, each inclusive; and \$10,000 thereof on the 1st day of July in each year from 1945 to 1954, each inclusive; interest to be payable semi-annually on the 1st day of July and January in each year; each of said bonds being in the denomination of \$1000; bid is invited upon the interest rate.

A certified check in the amount of five per centum of the bonds bid is to accompany each bid; such check to be drawn to the order of the Clerk of the Board of Supervisors of Hinds County, Mississippi.

The bonds will be sold to the highest bidder for at least the par value and accrued interest to the date of delivery. The Board of Supervisors of Hinds County reserves the right to reject any and all bids.

The proceedings relating to the issuance of said bonds have been prepared by Watkins, Watkins & Eager, Attorneys for the Board of Supervisors of Hinds County, Mississippi, and the legality of said bonds will be approved by Thomson, Wood & Hoffman, Attorneys, of New York City, whose opinion will be furnished the purchaser or purchasers.

Dated at Jackson, Mississippi, this 8th day of April, 1930.

W. W. DOWNING,
Clerk of the Board of Supervisors
of Hinds County, Mississippi.

Bids close April 29, 1930.

Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for concrete bridge floor, etc., as follows:

Garrett County, Contract G-57-63—Concrete bridge floor, approaches, etc., required for the bridge over the tracks of the Baltimore and Ohio Railroad Company on the road from Deer Park to Kitzmiller at Wilson.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 29th day of April, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 15th day of April, 1930.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close May 1, 1930.

\$660,000 4 1/2% General Obligation Bonds

SPARTANBURG COUNTY,
SOUTH CAROLINA

Spartanburg, S. C.

SEALED BIDS will be received by the undersigned and opened at the office of the County Board of Spartanburg County, in the City of Spartanburg, S. C., at 11 o'clock A. M., Thursday,

MAY 1ST, 1930,

for the purchase of the following described bonds of Spartanburg County, viz.:

\$660,000 General Obligation bonds, maturing serially.

\$23,000 May 1, 1931-1934, Inclusive

28,000 May 1, 1935-1938, Inclusive

33,000 May 1, 1939-1942, Inclusive

38,000 May 1, 1943-1946, Inclusive

43,000 May 1, 1947-1950, Inclusive

Bonds dated May 1, 1930. Interest at the rate of 4 1/2% per annum, payable semi-annually May 1st and November 1st, Coupon bonds, denomination \$1000, payable at Central Hanover Bank & Trust Company, New York, N. Y. General obligations. Unlimited tax.

The approving opinion of Messrs. Reed, Hoyt & Washburn, Bond Attorneys, of New York, N. Y., will be furnished, and all bidders, by submitting a bid, agree to that opinion as final on legality of the bonds.

Attorneys' fees and printing of bonds will be paid by the County. Bonds are being printed and will be ready for delivery on the day of the sale.

A certified cashier's check without limitation, for two per cent of the amount of the bonds, payable to the County Board of Spartanburg County, is required to accompany each bid. The checks of the unsuccessful bidders will be returned to them immediately after the award. The check of the successful bidder will be applied on the purchase price on compliance with his bid, and, in case of non-compliance within ten days after demand and tender of the bonds with the approving opinion referred to above, will be forfeited to the County.

The County Board of Spartanburg County reserves the right to reject any and all bids. Spartanburg, South Carolina, April 12, 1930.

COUNTY BOARD OF SPARTANBURG
COUNTY.

J. R. WESTMORELAND,

B. M. GRAMLING,

JNO. A. LAW, Chairman.

(Seal)

Attest:

J. L. M. WILLIAMS, Clerk.

STATEMENT OF BONDED AND

FLOATING INDEBTEDNESS

of the County of Spartanburg, S. C., and

other information relating to the above bond

issue:

Tax anticipation notes, due

June 1, 1930..... \$400,000.00

Bonds outstanding April 11,

1930 \$5,188,500.00

Less Reimbursement:

Paving Bonds... \$904,000.00

Sinking Fund... 61,640.69

965,640.69

Net Debt \$4,222,859.31

This bond issue will have no equity in

above sinking fund.

The County has an unlimited Ad Valorem Tax and a limitation of bond indebtedness of fifteen per cent of assessed valuation.

Assessed Valuation for Taxa-

tion, 1929 \$37,255,981.00

True Valuation (estimated)... 200,000,000.00

Population, Census 1920..... 94,265

Present Population (esti-

lated) 112,000

Tax Rate, 1929, \$40.50 per \$1000.

I hereby certify that the foregoing is a true statement as appears from the records of this office. I hereby certify that the County of Spartanburg has never defaulted in payment of its indebtedness, either principal or interest. Given under my hand and official seal of this office in the City of Spartanburg, S. C., this 12th day of April, 1930.

J. L. M. WILLIAMS (Seal)

Clerk of County Board
of Spartanburg County.

Bids close May 7, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., April 11, 1930.—SEALED PROPOSALS will be opened in this office at 3 P. M. May 7, 1930, for furnishing all labor and material and performing all work necessary for remodeling one electric freight elevator, etc., in the U. S. Custom House at New Orleans, La. The successful bidder will be required to furnish a performance bond of 50% of the contract price. Drawing and specifications may be obtained from this office. JAS. A. WETMORE, Acting Supervising Architect.

Bids close May 13, 1930.

Louisiana Highway Work

Baton Rouge, La.

Sealed Proposals for the construction of the following Projects will be received by the Louisiana Highway Commission, Room No. 608, Louisiana National Bank Building, Baton Rouge, Louisiana, until 11 o'clock A. M. on Tuesday, May 13, 1930. Proposals will not be received after this hour. At 11.15 o'clock A. M. of the same day and date they will be publicly opened and read in the Chamber of House of Representatives in the State Capitol Building:

PROJECT NO. 1401, READVERTISE-MENT, CHENEYVILLE-BUNKIE HIGHWAY. Located in Rapides and Avoyelles Parishes, Route No. 1. Length 8.1 miles. Width 18 feet. Concrete Pavement. Charges for plans \$2.00.

PROJECT NO. 1900, READVERTISE-MENT, LAKE CHARLES-TEXAS HIGHWAY. Located in Calcasieu Parish, Route No. 2. Length 8.82 miles. Width 18 feet. Concrete Pavement. Charges for plans \$2.00.

PROJECT NO. 2950, VILLE PLATTE-OPELOUSAS HIGHWAY. Located in Evangeline Parish, Route No. 22. Length 4.0 miles. Width 18 feet. Concrete Pavement. Charges for plans \$1.50.

PROJECT NO. 3604, GREYNA PAVEMENT. Located in Jefferson Parish, Route No. 2. Length 2.1 miles. Width 18 feet. Concrete Pavement. Charges for plans \$1.00.

PROJECT NO. 3650, STREETS IN GREYNA. Located in Jefferson Parish. Length 1.1 miles. Width 18 feet. Concrete Pavement. Charges for plans \$1.00.

PROJECT NO. 3803, RACELAND-HOUMA HIGHWAY. Located in Lafourche Parish, Route No. 2. Length 7.0 miles. Width 18 feet. Concrete Pavement. Charges for plans \$2.00.

PROJECT NO. 4202, MOUND-DELTA POINT HIGHWAY. Located in Madison Parish, Route No. 4. Length 7.10 miles. Width 18 feet. Concrete Pavement. Charges for plans \$2.00.

PROJECT NO. 4402, READVERTISE-MENT, LUELLA-CAMPTI HIGHWAY. Located in Natchitoches Parish, Routes Nos. 1 and 10. Length 11.66 miles. Width 18 feet. Concrete Pavement. Charges for plans \$2.50.

PROJECT NO. 4903, READVERTISE-MENT, MORELAND-MEEKER HIGHWAY. Located in Rapides Parish, Route No. 1. Length 11.16 miles. Width 18 feet. Concrete Pavement. Charges for plans \$3.00.

PROJECT NO. 6402, HUMPHREYS, LAKE BRIDGE HIGHWAY. Located in Terrebonne Parish, Route No. 2. Length 19.0 miles. Width 18 feet. Concrete Pavement. Charges for plans \$3.00.

Full information and proposal forms are available at the offices of the Highway Commission at Baton Rouge. Plans and specifications may be inspected there or will be furnished upon payment of amounts specified above (not to be refunded).

HARRY B. HENDERLITE,
State Highway Engineer.
O. K. ALLEN, Chairman,
Louisiana Highway Commission.

Bids close May 6, 1930.

Virginia Highway Work

Richmond, Va.

Sealed bids will be received until Tuesday, 10 A. M., May 6, 1930. Office of the Va. Dept. of Highways, Richmond, Va. Rt. 38, Proj. F474C, 5.4 mi. Grading and Drainage, 32,448 cu. yds. Excav. Rt. 10, Proj. S497E, 50,000 gals. Bit. Material, Furnishing, Hauling, Applying, 4.5 mi. Rt. 128, Proj. S538A and 540AB, 20,458 cu. yds. Excav., 61,987 sq. yds. Mac., 6 mi. Rt. 12, Proj. F634A, 86,291 cu. yds. Excav., 43,084 lbs. Reinf. Steel, 10,252 cu. yds. Soil, 3 mi. Details obtainable upon request.

Louisiana Highway Work

Baton Rouge, La., April 14, 1930.

Notice is hereby given that the Louisiana Highway Commission has cancelled the request for informal bids for the financing, design, construction and operation of toll bridges at the following locations:

MORGAN CITY OVER ATCHAFALAYA RIVER
MELVILLE OVER ATCHAFALAYA RIVER
COUSHATTA OVER RED RIVER
MONCLA OVER RED RIVER
JONESVILLE OVER BLACK RIVER
HARRISONBURG OVER OUACHITA RIVER
MONROE OVER OUACHITA RIVER
STERLINGTON OVER OUACHITA RIVER

HARRY B. HENDERLITE,
State Highway Engineer.
O. K. ALLEN, Chairman,
Louisiana Highway Commission.

Bids close April 29, 1930.

Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building seven sections of State Highway as follows:

Anne Arundel County, Contract No. AA-86-711—One section of State Highway along the Baltimore-Annapolis Boulevard from Sweetzers Bridge to Glenburnie, a distance of 4.68 miles (conc. shoulders)

Baltimore City, Contract No. BC-89-72—One section of State Highway along Arlington Avenue from Hillen Road to Grindon Avenue, a distance of 0.64 mile (sheet asphalt)

Carroll County, Contract No. CI-74-52—One section of State Highway from the New Windsor-Libertytown Road to Marston, a distance of 1.0 mile (concrete)

Cecil County, Contract No. Ce-85-24—One section of State Highway from the Elkton-Fair Hill Road to Providence Mills, a distance of 0.52 mile (concrete)

Frederick County, Contract No. F-122-54—Federal Aid Project 208C—One section of State Highway from the Urbana Pike near Hyattstown to Green Valley, a distance of 1.86 miles (concrete)

Washington County, Contract No. W-73-64—One section of State Highway from the end of Contract No. W-60 at Fort Frederick toward Clearspring, a distance of 2.12 miles (alt. bids on concrete and macadam)

Washington County, Contract No. W-76-68—One section of State Highway along the Williamsport Pike from Hagerstown to Williamsport, a distance of 4.5 miles (grading and drainage)

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 29th day of April, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 15th day of April, 1930.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close April 29, 1930.

Street Improvements

Hopewell, Va.

Sealed proposals will be received up to 8 P. M., April 29, 1930, by the Mayor and Council of the City of Hopewell, Virginia, for surfacing approximately 12,000 square yards with concrete pavement, with accessories.

A certified check or bidder's bond acceptable to the Council, drawn to the order of the City of Hopewell, for \$2000.00 shall accompany each bidder's proposal, which amount will be forfeited to the city in event the city accepts the bidder's proposal and bidder fails to execute contract and surety bond within ten days after award. Checks or bonds of unsuccessful bidders will be returned.

A surety and maintenance bond for 25% of the amount of the bid will be required and extend for one year after completion and acceptance of work. Bidders will be required to name price for five years maintenance bond which, if accepted, will release the original surety and one year maintenance bond on completion and acceptance of work.

All bids will be compared on basis of Engineer's estimate of the amount of work to be done. Copies of specifications may be obtained from the City Engineer upon receipt of \$5.00 deposit, which amount will be returned to bona fide bidders.

Plans may be seen at the City Engineer's office, or a set may be purchased for \$5.00. The right is reserved to reject any or all bids or any portion thereof, or to award contract as considered to the best interest of the city.

D. L. ELDER, Mayor.

ROY S. BRADEN, City Manager.

City Engineer:

E. S. VAN DEMARK.

Consulting Engineer:

J. B. McCARRY ENGINEERING CORP.,
Atlanta, Georgia.

Bids close May 15, 1930.

Ferry Properties

Charleston, S. C.

Sealed proposals will be opened by Cooper River Ferry Liquidating Commission of Charleston, S. C., on May 15th, 1930, for the purchase of their operating ferry properties, either in whole or any part thereof, consisting of practically new, double-ended ferry boat "PALMETTO," built in the year 1926, width 36 feet, length 136 feet, 360 horsepower direct reverse Fairbanks-Morse full Diesel engine, capacity 36 automobiles, 600 passengers. Also ferry docks and slips at Charleston, Hog Island and Mt. Pleasant. Also double-ended, iron hull, ferryboat "LAWRENCE," 52 feet wide, 153 feet long.

Commission reserves the right to reject any and all bids. For further particulars address

COOPER RIVER FERRY LIQUIDATING
COMMISSION,
A. O. HALSEY, Chairman,

Bids close May 8, 1930.

Reservoir

Selma, Ala.

Sealed proposals for furnishing materials and constructing a One Million Gallon Capacity, covered, reinforced concrete reservoir and appurtenances will be received by the Selma Water Works Commission of the City of Selma, Alabama, at the office of the Commission until 2 P. M. Thursday, May 8th, 1930.

Each proposal must be accompanied by a certified check, payable to the Commission, in an amount equal to five (5) per cent of the bid as a guarantee that the contract will be entered into, if awarded. A bond equal to one hundred (100) per cent of the contract price will be required of the successful bidder as surety that he or it will pay for all the materials and labor used in said contract, and for the faithful performance of same.

Plans and specifications are on file at the office of the Selma Water Works Commission at Selma, Alabama, and with Wiedeman and Singleton, Engineers, Atlanta, Ga.

Bidders may obtain copies of the specifications from the Engineers by enclosing certified check for ten (\$10.00) dollars, payable to the Selma Water Works Commission. Blueprints may be had at the cost of printing. If plans and specifications are returned within thirty days after opening bids, the check for ten (\$10.00) dollars will be returned. The Commission reserves the right to reject any or all bids.

ALBERT THALHEIMER, President.
Selma Water Works Commission

Additional Proposals on Page 94

Southwestern Outfall

ADVANCE NOTICE

Louisville, Ky.

Plans and Specifications are expected to be completed on or about May 15, 1930, for receiving bids some time in June upon the first section of the SOUTHWESTERN OUTFALL.

The work involved in this first section will probably consist of constructing:

5,840 lin. ft. of Reinforced Concrete
Sewer, 27'6" high x 18'4" wide.
4,340 lin. ft. of Reinforced Concrete
Sewer, 23'6" high x 15'8" wide.
With outlet structure into Ohio River.

The quantities involved will probably amount to:

627,000 cu. yds. of Excavation.
740,000 cu. yds. of Backfilling.
85,300 cu. yds. of Concrete.
8,170,000 pounds of Steel Reinforcing.

Contractors who will probably be interested in submitting bids upon this work will be notified by letter when plans and specifications are ready for distribution, with date set for receiving bids, if they will communicate with

COMMISSIONERS OF SEWERAGE OF
LOUISVILLE.

WOOLSEY M. CAYE,
Technical Engineer,
400 Marion E. Taylor Bldg.,
Louisville, Ky.

Bids close May 2, 1930.

Sewer Construction

Charlottesville, Va.

Sealed proposals for the construction of sanitary sewers and appurtenances will be received by the City of Charlottesville until 2 P. M. on Friday, May 2nd, at the office of the City Manager, H. A. Yancey, at the City Hall.

Each proposal must be accompanied by a certified check in the amount of \$5000.00 on a solvent National Bank, made payable to the City of Charlottesville. Bid bonds will not be received in lieu of the above specified certified check.

As is covered in detail by the specifications the City of Charlottesville will furnish all pipe, manhole castings and flush tanks required for the work at the prices, and under the conditions, stipulated in the specifications, together with certain other minor materials. The contractor is to furnish all other material and labor.

The approximate quantities involved are as below tabulated:

Excavation	53,000 cu. yd.
8-inch sewer line	82,000 ft.
10-inch sewer line	600 ft.
12-inch sewer line	2,000 ft.
15-inch sewer line	1,600 ft.
18-inch sewer line	3,000 ft.
24-inch sewer line	4,000 ft.
Standard manholes	330
Drop Manholes	25
Flush Tank Structures	109

In addition to the above quantities there will be required a small amount of Cast Iron pipe and fittings, all of which will be furnished F. O. B. cars by the City of Charlottesville, and is to be hauled and incorporated into the work by the contractor.

The approximate quantities are subdivided by sewer districts.

Plans and specifications are on file at the City Manager's Office and at the office of Lee H. Williamson, Consulting Engineer, City Finance Building, Charlottesville, Virginia. Specifications and bid form will be forwarded upon receipt of application to the City Manager or the Consulting Engineer. Plans may be had from the office of the Consulting Engineer upon payment of \$10.00 and these plans remain the property of the purchaser.

It is the desire of the city to let the entire work to one contractor, but the City of Charlottesville expressly reserves unto itself, through its City Manager, the right to let any or all of the work as appears to the best interests of the city, and further the right to reject any or all bids.

Bond will be required in the full amount of the contracts so awarded.

Payment for the work will be made in cash on the basis of Engineer's monthly estimates from funds resulting from the sale of sewer bonds.

Men will be available at the office of the Consulting Engineer up to and including Thursday, May 1st, to show prospective bidders the location and extent of the work.

H. A. YANCEY,
City Manager.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

FOR SALE—Factory Sites, City Property, Water Frontage, Tracts for Suburban Development. Timber Lands and Colonizing Lands. H. H. Wefel, Jr., Mobile, Alabama.

CUBA MINERALS For Sale—Outcroppings—Lead-zinc ten million tons; Manganese seven million tons; 3 rich gold strikes; 900 acres proven oil land at Matanzas. R. M. BURT, Alta Vista Hotel, Miami, Florida.

MANGANESE DEPOSIT

MANGANESE—NEAR RAILROAD AND RIVER, IN ROCKINGHAM CO., VA.; 260 ACRES HIGH-GRADE ORE. HAS YIELDED 6000 TONS THE ACRE. ADJACENT LAND ALSO YIELDS ORE. FOR DESCRIPTION AND TERMS WRITE A. L. HARNSBERGER, MT. AIRY, MD.

PHOSPHATE ROCK PROPERTY

PHOSPHATE ROCK PROPERTY in Tennessee For Sale—1500 acres containing approximately 3,000,000 tons brown rock and 3,000,000 tons blue rock; also plant complete for mining, washing, drying and grinding rock; 4000 tons storage shed; plenty water for washing rock. N. & C. & St. Louis R. R. siding. Sold cheap. Care FRED. G. BUSHOLD, Cregg Bldg., Lawrence, Mass.

COAL LANDS AND MINES

FOR SALE—1500 tract of High Grade Coking and By-Product Coal; two seams, 4 and 7 feet. On new extension of N. & W. R. R. in Virginia. A good investment either to hold or operate. Safer and one that will return you a better profit on your investment than stocks or bonds. Address J. G. BUSTON, Owner, Tazewell, Virginia.

50,000 ACRES COAL LANDS, \$5.00 per acre. East Tennessee. On railroad; good markets North and South, with favorable freight rates. Excellent steam, domestic, by-product coals, 3 to 10 ft. seams. Producing mines on property withheld from sales. Excellent opportunity for safe, long time investment, operating or leasing. Address No. 8090, care Manufacturers Record.

TIMBER AND TIMBER LAND

FOR SALE—Approx. four million feet virgin hardwood timber; short haul to B. & O., near Piedmont, W. Va. Address Box 355, Mt. Lake Park, Maryland.

900,000,000 FEET tropical fancy hardwoods including about 125,000,000 feet genuine Mahogany (Swietenia) all one tract; average less than \$1.00 per thousand. Economical logging, stable Governmental conditions; equable climate; advantageous rates and shipping facilities to the states. Offered for sale first time. Excellent opportunity for investment or long timber supply. Title perfect. Address, No. 8068 care Manufacturers Record, Baltimore, Md.

FARM, FRUIT AND TRUCK LANDS

FLORIDA

BEAUTIFUL 60-acre water front estate for sale, or will sell stock in syndicate; 50 acres in bearing orange and grapefruit. Fruit will pay for property in from 5 to 8 years.

Beautiful \$30,000.00 residence on property with 1300 feet on water front, 800 feet seawall. This property has its value from the standpoint of a citrus grove, or as an investment for a beautiful water-front development in the near future, as it is in the city limits of Fort Myers. Price \$75,000.00. The P. John Hart Realty & Investment Corporation, No. 6 Postoffice Arcade, Fort Myers, Florida.

Rates, Terms and Conditions

RATES: 30 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to a line. When the advertisement contains a number of long words proper allowance should be made.

Rates for Special Contract:

100 lines 28c a line
300 lines 26c a line
500 lines or more 25c a line

TERMS: For transient advertising cash with order; check, postoffice or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

CONDITIONS: No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

FARM, FRUIT AND TRUCK LANDS

FLORIDA

FLORIDA ESTATE — Five thousand acres, timber oranges, road shell, houses, daily mail, hard roads, Saint Johns River landing. Owner JOHN E. HARRIS, Beresford, Florida.

MISSISSIPPI

YES: 200 acre level stock farm, \$5.00 an acre; near Enterprise, Miss. BARBOUR, Enterprise, Miss.

8000 ACRES, cut-over, famous Yazoo, Miss., Delta; 2 ml. sta.; ideal long staple cotton production; hunters' paradise; deer, turkey, fishing. Near proven gas field; \$7.50 acre. Barbour Realty, Vicksburg, Miss.

MISSOURI

40 ACRES fruit and poultry land Laclede Co., Mo.; \$200; \$5 down, \$5 monthly; no interest. Other bargains. Box 385, Lebanon, Mo.

VIRGINIA

RIVER FARM FOR SALE OF EXCHANGE—750 acres, brick mansion, two stock barns, several tenant houses, 125 acres rich bottom land 325 acres fine upland, 300 acres timber. Good neighborhood. Low price. GEO. V. VENABLE & CO., Lynchburg, Va.

SOUTHERN HOMES

AIKEN, S. C.

Sale or Rent—Cottage, 12 rooms, 3 baths. Hot water heat, electric lights. Excellent location. Chauffeur's quarters, 2 rooms, 1 bath, 2 car garage. GEORGE F. ARCHER, Aiken, S. C.

SOUTHERN HOMES

In the best city in the Carolinas, \$10,000 to \$75,000, according to size and location. F. C. ABBOTT & CO., Charlotte, N. C. 32 years in Charlotte Real Estate

BUSINESS OPPORTUNITIES

LONG TERM LOANS, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

BUSINESS OPPORTUNITIES

FOR SALE—A going coal yard, centrally located, in Norfolk, Virginia. Good chances for right kind of manager. Address No. 8077, care Manufacturers Record, Baltimore.

INVESTIGATE OPPORTUNITY offered to parties willing and able to lend or guarantee \$1000 up each, toward a manufacturing enterprise. For particulars address No. 8086 care Manufacturers Record.

FOR SALE—To right party half interest in profitable hamper and veneer mill. Located in Florida. Plenty of Timber available. Or will sell outright. Address No. 8081, care Manufacturers Record.

MANUFACTURERS—Write for our FREE Classification Sheets of inventions for sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. ADAM FISHER MFG. CO., 578 Enright, St. Louis, Mo.

FOR SALE—One-half interest in brick plant. Good proposition to one who can take complete charge. Over 600 acres of good material, clay, coal and shale. Good colors. Now making backups. On two railroads; inside shifting limits; one-half mile from town. Good domestic coal trade. Write H. D. CUSICK, New Comerstown, Ohio.

FOR SALE OR RECAPITALIZATION—Veneer plant for face veneers; going concern; 120" Merritt lathe, 66" Capital lathe, Capital Veneer saw, Protor & Schwartz dryer; situated in the midst of fine body of white oak and walnut. On B. & O. R. R. in West Virginia. Correspondence solicited. No. 8084, care of Manufacturers Record.

LUMBER AND FURNITURE MANUFACTURING OFFERS OPPORTUNITY WITH FUTURE

As equal, silent or active partner, with young man who owns at Virginia shipping station twenty million feet Oak and Chestnut timber, in manufacturing same into furniture and building materials, requiring \$50,000 investment, amply secured by timber and realty. P. MAC, Box 14, Point Pleasant, Pa.

MEXICO ADVERTISING

MEXICO—If you contemplate extending your business into Mexico, we are in position to furnish you a survey of any line, translate your printed matters into perfect Spanish and circularize Mexico for you. Also furnish you display space in our offices or salesroom and attend to your business here. The four officers of this Company have been in business in Mexico for over 25 years. References and terms given on request. Mexico Information Bureau, Capuchinas No. 69, Box 572, Mexico, D. F.

FINANCIAL

MONEY WANTED

6, 7 and 8% Mortgage Loans on City, Town or Country property. Southern Land & Investment Co., Baton Rouge, Louisiana.

INDUSTRIAL SURVEYS

ENGINEERING REPORTS on resources of cities and towns. Recommendations for industrial development and zoning made by specialists in locating industries.

TECHNICAL SERVICE CO., Woolworth Building, New York City

DEVELOPING AND ENGINEERING

ORGANIZING—DEVELOPING—ENGINEERING

Engineering firm, widely experienced in investigating, organizing, developing, designing and supervising construction, solicit correspondence regarding development or extension of meritorious projects and existing industries, power plants and utilities. Address No. 8016, care Manufacturers Record.

INDUSTRIAL PLANTS

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WANTED—Reliable spare time workers, commission basis, for very remunerative introductory assistance in making local machine sales, etc. **PAULY MFG. CO.**, 1333 K Northwest, Washington, D. C.

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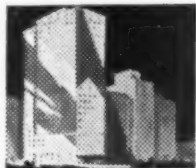


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13-100 HP., Westgh., CB, 700 RPM., complete.....	\$475.00 ea.
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- 2-257 HP. Casey-Hedges Water Tube Boilers, 175 lbs. Pressure.

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Stacks from 30" to 50" diameter

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- 1-1000-lb. Niles Cement Pond single frame steam forging hammer.
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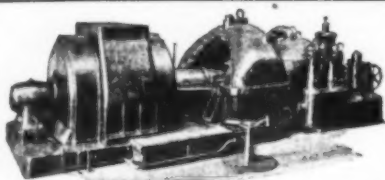


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10,000 KVA Turbo typical of 4 units recently delivered and similar to the following.

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1—15,000 KW CW-218	Frame—1800 RPM
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1—7,500 KW CW-78	Frame—1800 RPM
1—5,500 KVA CW-76	Frame—3600 RPM
1—4,000 KVA CW-76	Frame—3600 RPM
2—1,700 KVA CW-26	Frame—3600 RPM
1—1,500 KVA CW-16	Frame—3600 RPM

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A.S.M.E. CODE DESIGN BOILERS 200-225 lbs.

2—1500 H.P. Cross Drum B & W
2—2850 HP Laddi Bent Tube
5—627 HP Stirling Plant, modern stokers, auxiliaries
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Verification and proof of new equivalent condition easily reached on personal inspection
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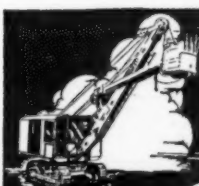
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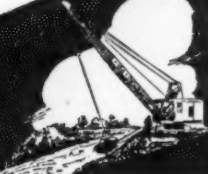
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Rental payments may apply on purchase

1—Model 105 Northwest gasoline shovel 1 cu. yd. capacity in good operating and mechanical condition. A real bargain. Located in Central Tennessee.

1—30-B Bucyrus steam dragline on caterpillars equipped with 35-ft. boom. 1 cu. yd. bucket. Machine in excellent condition, priced for quick sale. Located near Chattanooga, Tenn.

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1—14-B $\frac{3}{4}$ yard Bucyrus Caterpillar Steam Shovel.

All the above have been rebuilt and are like new in condition.

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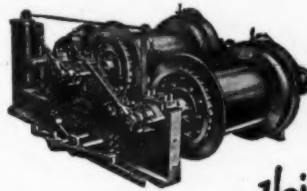
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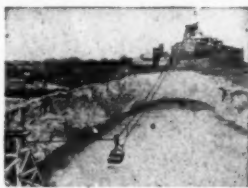
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2 to 100 TONS
GEAR DRIVE AND OIL-ELECTRIC
GASOLINE, DISTILLATE, DIESEL, BATTERY
Write for Bulletin and Performance Data
GEO. D. WHITCOMB CO.
ROCHELLE, ILLINOIS





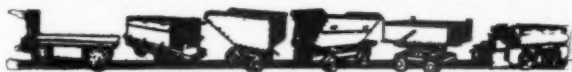
Owen Buckets

Greater Digging Power
Faster Operation
Longer Life
Guaranteed Against Breakage

OWEN BUCKET CO.
4015 BREAKWATER AVENUE, CLEVELAND, OH.

They get
"A Mouthful at Every Bite" and More Bites Per Day

INDUSTRIAL CAR EQUIPMENT



THE ATLAS CAR & MANUFACTURING CO.
Cleveland, Ohio



BOTTOM DUMPING and TURN-OVER BUCKETS

Write us for information on
Contractors Buckets

G. L. Stuebner Iron Works, Inc.
Manufacturers of Material Handling Equipment
So. Hancock St. Long Island City, N. Y.






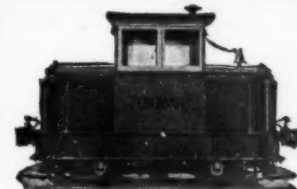
CARS KOPPEL TRACK

KOPPEL for all engineering and industrial uses **KOPPEL**

KOPPEL INDUSTRIAL CAR & EQUIPMENT CO.
NEW YORK CHICAGO
SAN FRANCISCO KOPPEL, PA. PITTSBURGH



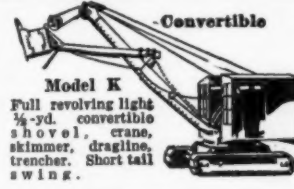
KNOWN RELIABILITY!
Bucyrus-Erie equipment is known the world over, for dependable, low-cost operation. Shovels, Draglines, Cranes—all sizes—Gas, Diesel, Electric, Gas + Air, Diesel + Air, Steam. Also Railway Cranes, Spreader Plows, etc. Write for bulletins.
BUCYRUS-ERIE COMPANY
So. Milwaukee, Wis., Evansville, Ind., Erie, Pa.



CINCINNATI LOCOMOTIVES

for
INDUSTRIAL-CONSTRUCTION-SWITCHING
SERVICE

THE CINCINNATI CAR CORPORATION
Station Plaza, Cincinnati, Ohio, U.S.A.



POWER SHOVELS Cranes, Trenchers SKIMMERS

Full or part circle

BAY CITY SHOVELS, Inc.
Bay City, Mich.



**Suit Bucket
and Traction Speed
to the Digging!**

HIGH bucket speed with fast traction and conveyor speed when the digging is easy—slower bucket or slower traction, or both, when it's tough going! Two bucket speeds, four traction and two conveyor speeds make the Parsons adaptable to any sort of digging and allow full-capacity operation.

Because it's so thoroughly anti-friction in design, equipped with roller bearings, and with gears in enclosed oil bath, the Parsons delivers utmost power to the buckets where it counts most for profits! It's the *Heavy Duty Ditcher* with the patented offset boom that digs on either side within inches of curbing, etc. and spills its load to either side. 5 sizes — the right one for your job.

Write for Parsons Ditcher Catalog today.

N. E. C. PRODUCTS

KOEHRING
Pavers, Mixers; Power Shovels,
Pull Shovels, Cranes, Draglines;
Dumpers.

INSLEY
Excavators; Concrete Placing
Equipment, Cars, Buckets,
Derricks.

T. L. SMITH
Tilting and Non-tilting Mixers,
Pavers, Weigh-Mix.

PARSONS
Trench Excavators, Backfillers.

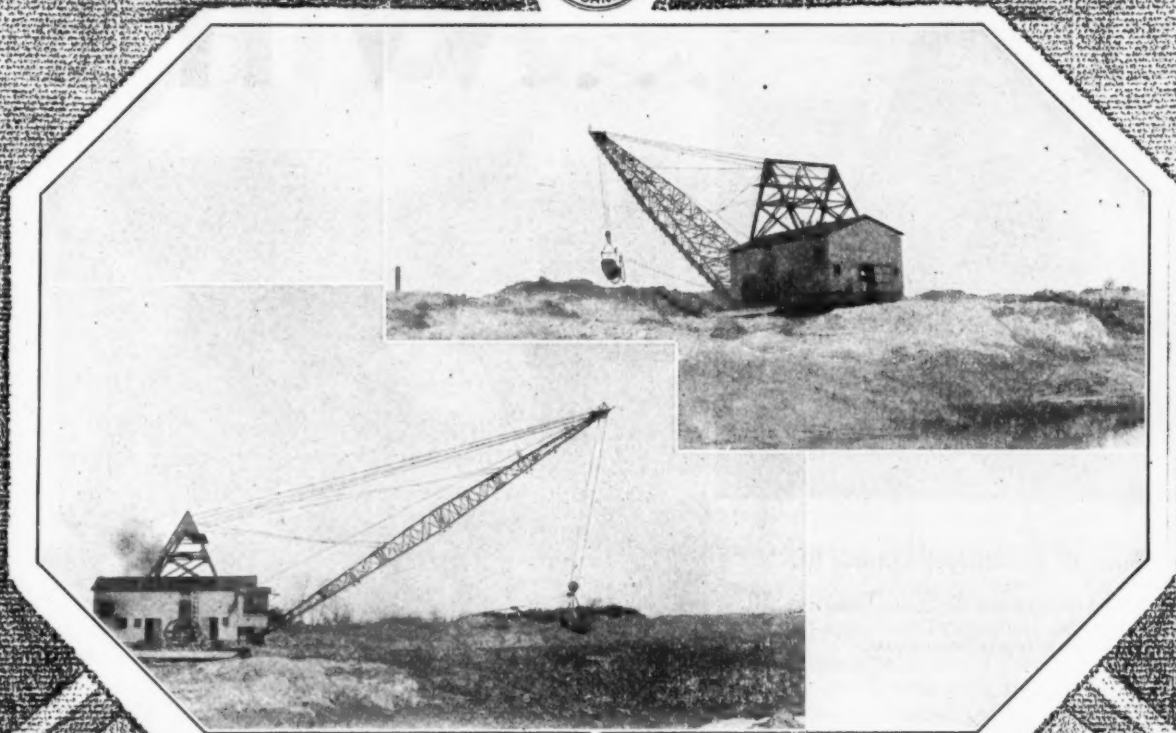
C. H. & E.
Portable Saw Rigs, Pumps,
Hoists, Material Elevators.

KWIK-MIX
Mixers: Concrete, Plaster
and Mortar.

National Equipment Corporation

**30th St. & Concordia Ave.
Milwaukee, Wisconsin**

J. L. Hart Machinery Co., 407 Eunice Ave., Tampa, Fla.; Young & Vann Supply Co., 1725 First Ave., Birmingham, Ala.; Wilson-Weesner-Wilkinson Co., 108 Fatherland St., Nashville, Tenn.; Graham B. Bright, 901 Electric Bldg., Richmond, Va.; D. C. Elphinstone, Inc., 120 S. Calvert St., Baltimore, Md.; General Equipment Machinery Co., Inc., 116 N. E. Sixth St., Miami, Fla.; W. C. Caye & Co., 169 Walker St., Atlanta, Ga.; Carolina Contractors Equipment & Supply Co., P. O. Box 576, Columbia, S. C. A 5772-I



The biggest capacity Monighan ever built at work on the million yard levee building job in Bayou Goula Section. Highways Construction Co., New Orleans, Contractors.

Walker with 150-ft. Boom and 6-yd. Bucket on Mississippi Levee Job.

Here's the Monighan Walker that has been brought out to meet the demands for a big machine that—

- can easily be transported and maneuvered over soft ground
- can be operated without mats except in extremely wet, rainy weather
- can be side-stepped at various angles to the line of work
- can be zigzagged to the line of work for excavating wider cuts.

It will pay you to investigate the records Monighan Walkers are making on many of today's large and small excavating and material handling jobs.

MONIGHAN MANUFACTURING CORPORATION

937 N. Kilpatrick Ave.

Chicago, Ill.

MONIGHAN

.....What

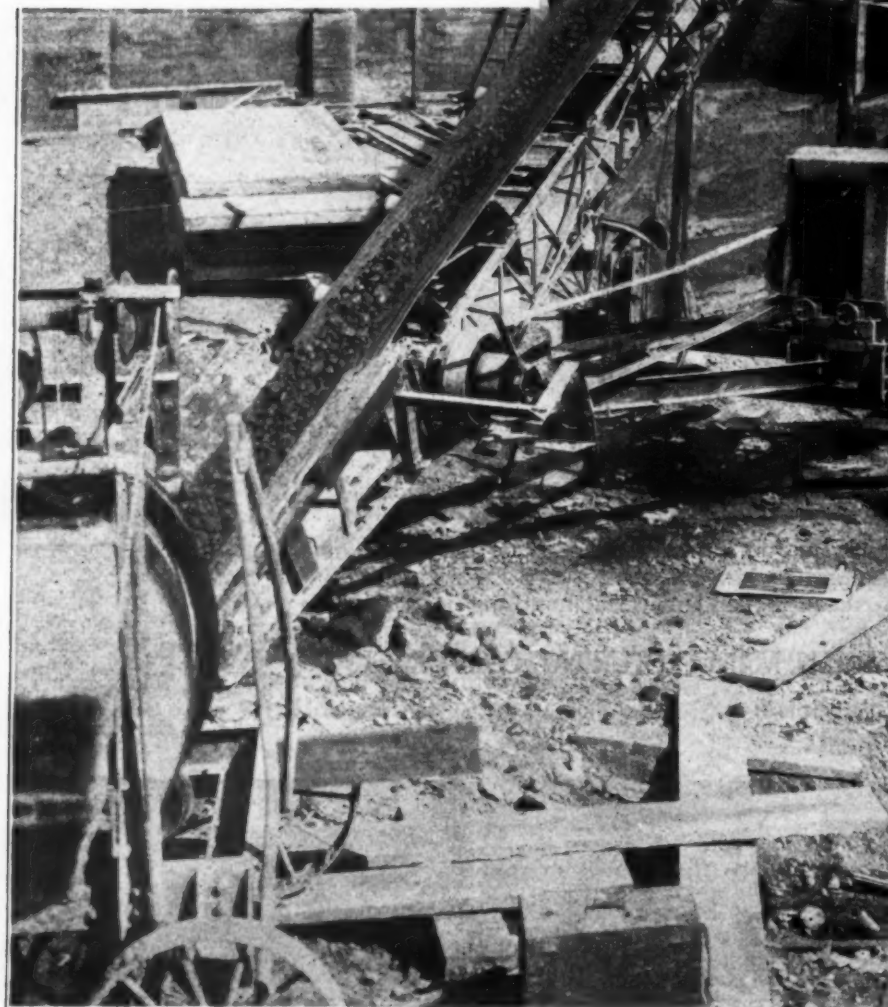
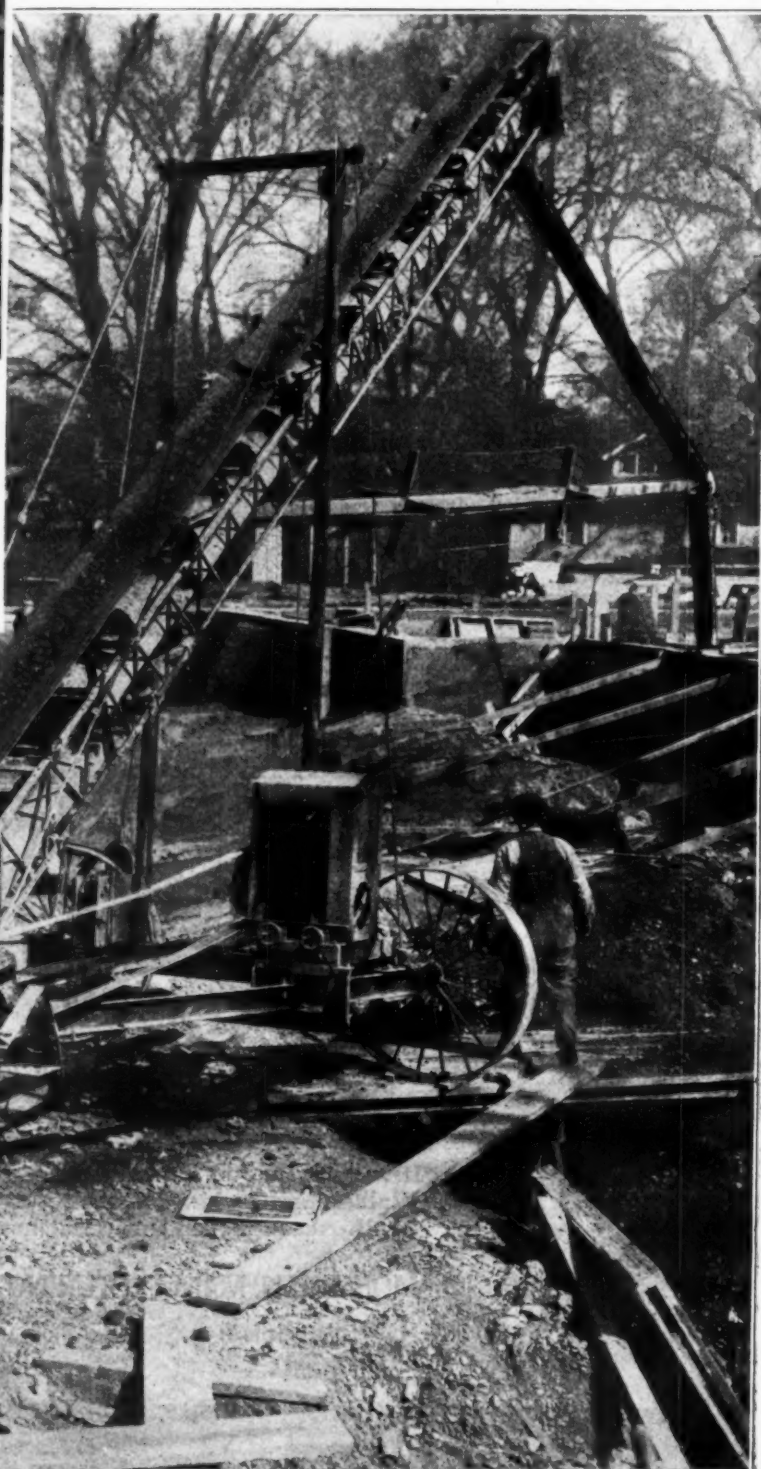


Job: Galena M. E. Church, Aurora, Ill.

Contractor: Opperman & Son, Pontiac, Ill.

Above: Spouting from conveyor.

Below: Taking wet concrete from mixer.
Note well-filled belt.



BAR
BARBER-GREENE

What.....No Wheelbarrows?

On this job, a 45-foot Barber-Greene did all the work usually assigned exclusively to wheelbarrows and wheelbarrow pushers.

The job is not big, as jobs go, but it illustrates the way Barber-Greene Conveyors are saving money for contractors on a wide variety of work.

As the boys broke sod, the Barber-Greene was set up to carry all excavated dirt out of the hole to waiting trucks or piles.

With the finish of the excavating, the receiving end of the Barber-Greene was set beneath the discharge chute of a one-bag mixer. This simple mixing plant was located in the center of the job.

From that location the conveyor, carrying two chutes on the discharging end, delivered all foundation concrete directly into the forms.

So important is the place the Barber-Greene has gained in the handling of wet concrete and other materials, that we have prepared a book covering typical Barber-Greene Conveyor jobs.

These jobs range from small buildings up to the world's largest, to locks and retaining walls, bridges and sewers, subways to irrigation ditches . . . or what have you.

Just send a post card for a copy of: *New Applications and Set-Ups*. No obligation, of course.

No wheelbarrows were there—and what's more, no expensive wheelbarrow pushers.

On simple jobs like this, to big ones like the Merchandise Mart in Chicago where 55 Barber-Greene's handled all floor concrete and aggregates, as well as excavated material, these conveyors are showing contractors new ways to profits.

For the Barber-Greene's broad belts provide a smooth-riding, swiftly-moving highway for any loose or semi-loose material.

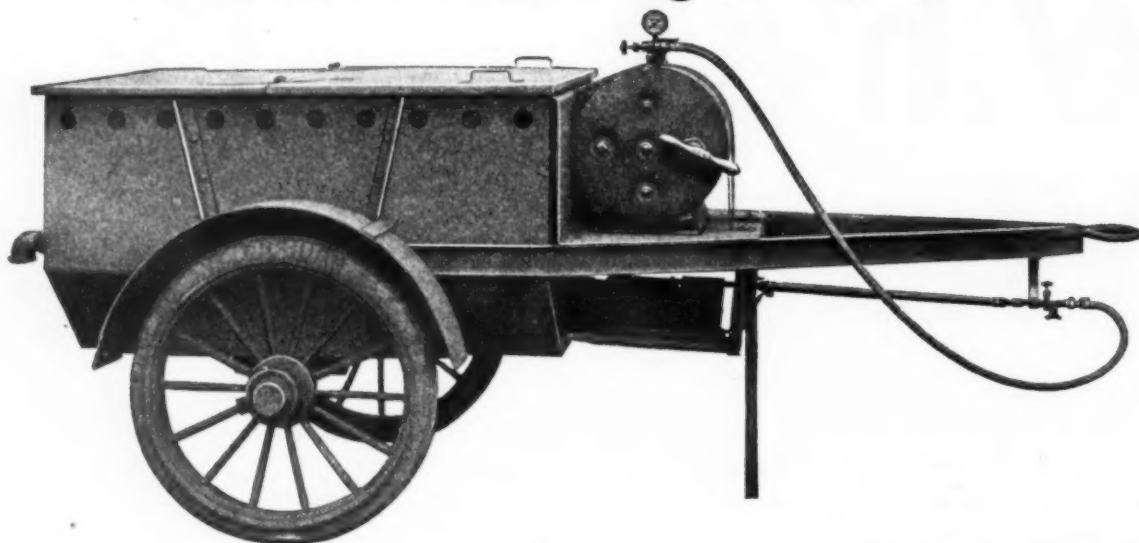
All you do is put the stuff on one end and watch it come off the other—just where you want it.



Taking dirt from excavation to truck

BER  **GREENE**
COMPANY, 560 WEST PARK AVENUE, AURORA, ILLINOIS

BUILT FOR QUALITY



HONHORST TAR AND ASPHALT HEATERS

ALL TYPES AND SIZES—OIL OR SOLID FUEL

MADE BY

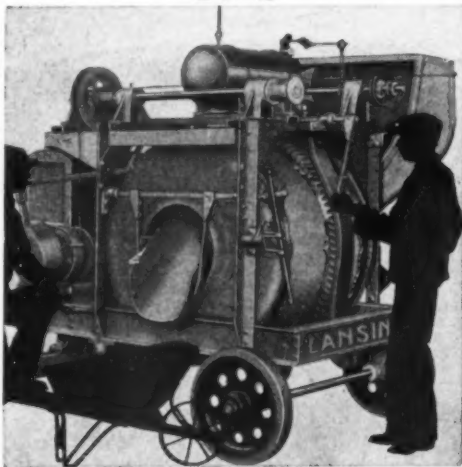
THE JOS. HONHORST CO.

1016-1020 W. Sixth Street

CINCINNATI, O.

EQUIPMENT FOR CONTRACTORS

The FAMOUS LANSING MIXER 10-S



A mixer built as all Lansing Products have been built for nearly fifty years—up to a standard. Made complete (except engine) in Lansing Company factories. Capacity: 10 cu. feet per batch. Powered with 12 H. P. 4 cylinder LeRoi gasoline engine.

Write for complete specifications and prices

LANSING COMPANY

602 N. CEDAR STREET, LANSING, MICHIGAN

LANSING

**Crushed Stone
Mascot Chatts Roofing Gravel
Asphaltic Roadway Gravel
Asphalt Filler Dust**



**AMERICAN LIMESTONE COMPANY
KNOXVILLE TENNESSEE**

CRUSHED LIMESTONE Best for All Purposes

We manufacture all sizes of stone suitable for all classes of road building and concrete work where only a high-grade limestone is required.

Quarries opened up in 1912.

Capacity 4000 tons daily.

Quarries:

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.

W. W. BOXLEY & COMPANY

Room 711, Boxley Building, - ROANOKE, VA.

SAND

Bank Building Concrete Paving

WASHED GRAVEL

In Car, Scow and Barge Lots

THE ARUNDEL CORPORATION

BALTIMORE, MD.

Office, PIER 2, PRATT STREET

Wharves: PIER 2, PRATT ST., and FOOT OF CLINTON ST.

SAND—GRAVEL—BRICK FILTER GRAVEL

Washed Sand and Gravel for Concrete
Roads and Buildings

Filter Gravel, all sizes—Building Bricks

FRIEND & CO., INC. River St., Petersburg, Va.



for economy and perma-
nence in Road Building and
General Construction

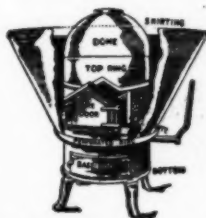
WOODSTOCK SLAG CORP.

Southern Railway Bldg., Birmingham, Ala.

SAND DRYERS

(With or without External Gratings)

A portable machine, daily capacity 5 to 7 tons.



This dryer has a low first cost, is easily and cheaply operated and guaranteed dry sand.

The low cost makes it valuable for companies needing dry sand on two or more jobs at the same time, thereby eliminating the handling cost of one point only.

Write for descriptive pamphlet

The Ripley Foundry & Machine Co.
Ripley, Ohio

For Contractors, Railroads,
Trolley Lines, Coal Com-
panies, Industrial Plants,
Foundries.

DRYERS

FOR ALL MATERIALS

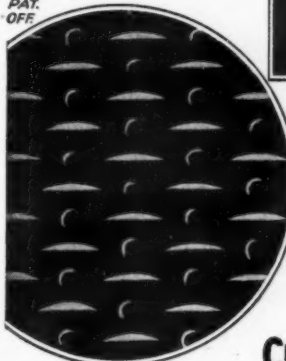
AMERICAN PROCESS CO. Roehling Bldg. NEW YORK CITY
117 Liberty St.

SEAWALLS WEBER SYSTEM
MANY DIFFERENT TYPES TO MEET EVERY CONDITION.
SAFEST AND MOST PERMANENT CONSTRUCTION.
ENORMOUS SAVING OF COST
FOR COMPLETE INFORMATION WRITE TO—
SHORE-LINE BUILDERS, INC.
JACKSONVILLE, FLORIDA.
WEBER SYSTEM **BULKHEADS**

Practical-
Convenient-
Durable-
Economical-
Safe.....



REG. U.S.
PAT.
OFF.



This exclusively designed plate, combining the above features, is indispensable for use on detours, bridge floors, railroad crossings, sink holes, factory yards and floors, expansion joints, etc. etc.

As treads on concrete roads they guide traffic and eliminate costly repairs, lasting indefinitely.

They offer safe traction for light or heavy loads. Send for literature.

CENTRAL IRON & STEEL CO.

HARRISBURG, PENNA.

Branch Offices in Principal Cities

UNDERWRITERS'
LABORATORIES
INSPECTED S.A. 443

**"KNOBBY" NON-SKID
CENTRAL FLOOR PLATES**

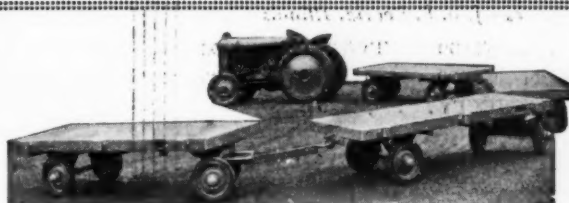
FLOOR NEVERSLIP PLATES

"The Plate with Perfect Diamonds"

AMERICAN PRESSED STEEL CO.
PHILADELPHIA, PA.

ASPHALT PLANTS

**THE SIMPLICITY
SYSTEM COMPANY**
CHATTANOOGA, TENNESSEE



EWC TRAILERS are made for every industrial haulage purpose. Special trucks and trailers designed and built for individual requirements.

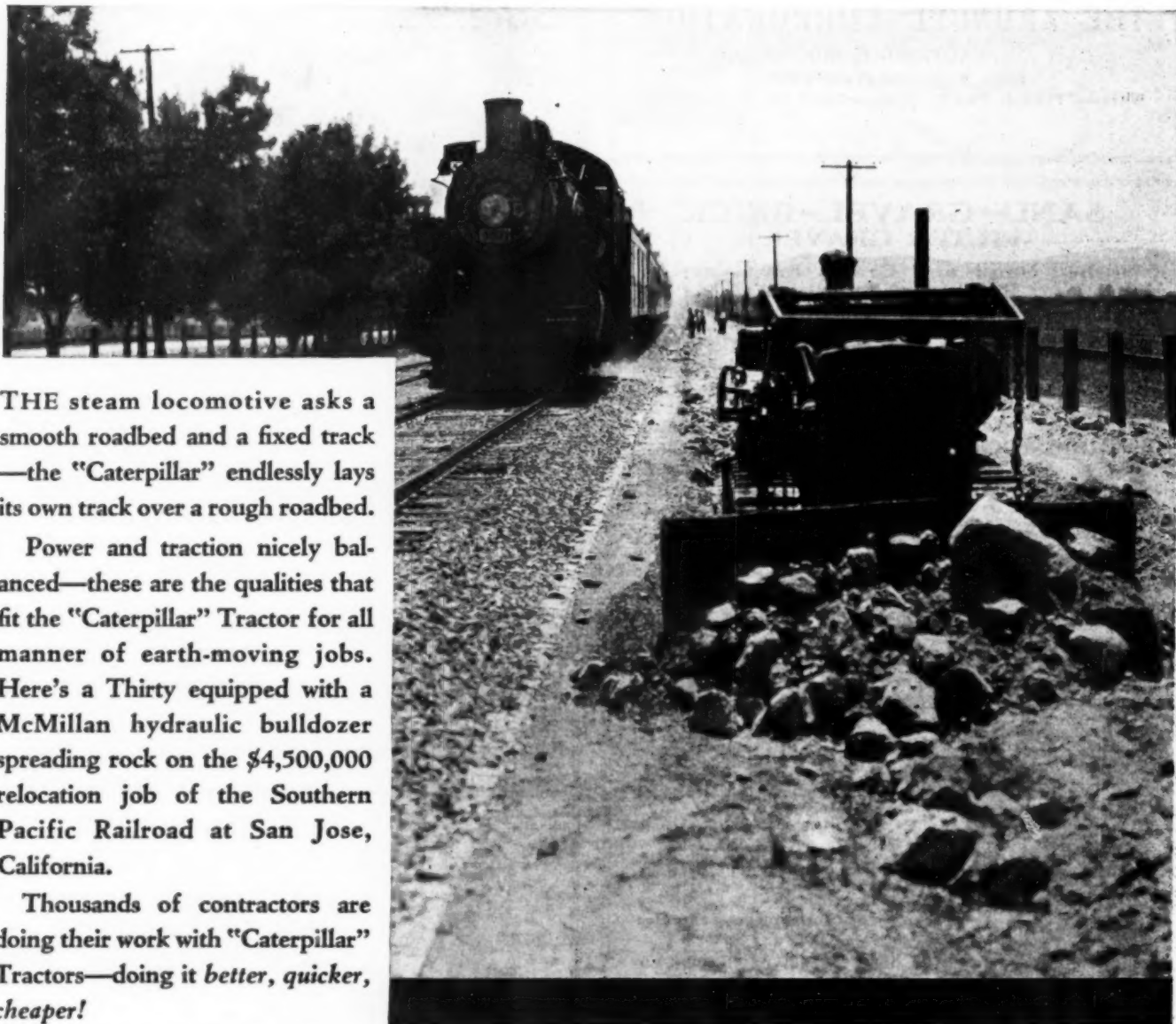
TRUCKS and WHEELS for mounting portable machinery of all kinds, any size and capacity.

TELL US your hauling problem and let us suggest the equipment for it.

ELECTRIC WHEEL COMPANY
5 Ohio Street QUINCY, ILL.

CONQUERED

by the "Caterpillar" Tractor



THE steam locomotive asks a smooth roadbed and a fixed track—the "Caterpillar" endlessly lays its own track over a rough roadbed.

Power and traction nicely balanced—these are the qualities that fit the "Caterpillar" Tractor for all manner of earth-moving jobs. Here's a Thirty equipped with a McMillan hydraulic bulldozer spreading rock on the \$4,500,000 relocation job of the Southern Pacific Railroad at San Jose, California.

Thousands of contractors are doing their work with "Caterpillar" Tractors—doing it *better, quicker, cheaper!*

Prices—f. o. b. Peoria, Illinois

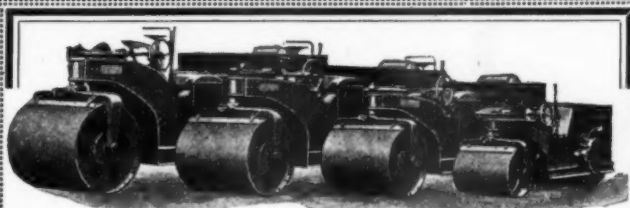
TEN . .	\$1100	TWENTY	\$1900
FIFTEEN	\$1450	THIRTY	\$2375
SIXTY. .	\$4175		

Caterpillar Tractor Co.

PEORIA, ILL. and SAN LEANDRO,
CALIF., U. S. A.

Track-type Tractors Combines Road Machinery
(There's a "Caterpillar" Dealer Near You)

CATERPILLAR
REG. U. S. PAT. OFF.
TRACTOR



Buffalo-Springfield ROLLERS

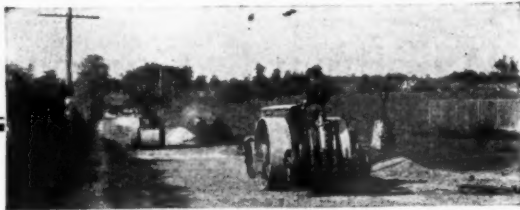
Serve Faithfully Under ALL Conditions

In the case of a road roller, every hour lost is a serious matter—particularly on time contracts. With Buffalo-Springfield on the job, there is a sense of security in their reliability exceedingly gratifying to the contractor, whether on maintenance or new construction.

Built in a wide range of weights and sizes, both three wheel and tandem, steam and motor driven.

Illustrated literature upon request.

The Buffalo-Springfield Roller Co.,
Springfield, Ohio



ACME ROAD MACHINERY  COMPANY, FRANKFORT, N.Y.

ACME
Portable Bins



ACME ROAD MACHY. CO. FRANKFORT, N.Y.

SEND FOR FREE CATALOG

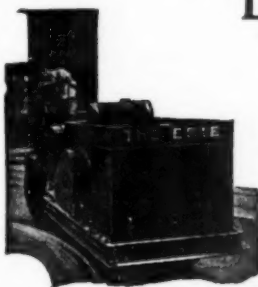
HUBER MFG. CO.

310 E. CENTER ST. MARION-O.



HUBER MOTOR ROLLERS

Let the ERIE Roll It!



You save hand tamping costs when you use the ERIE Roller. Roll right up to curbs, headers, man-holes, and around the curves—

The ERIE turns in a shorter radius, steers more easily and has better clearance.

Write for Bulletin "M".

Erie Machine Shops
Erie, Pa.

ERIE ROLLERS
GAS AND STEAM SAME HIGH QUALITY

Kaolin and Refractory Clays in Georgia

The refractory clay and kaolin belt of Georgia extends from Augusta to Columbus, covering an area of approximately 10,000 square miles. These deposits are the largest in the Eastern section of the country.

The Central of Georgia Railway has made a comprehensive survey of these resources and can supply information concerning them or the manufacture of clay products.

Write for any or all of these bulletins:

Utilization of Georgia Kao-

lins for Refractories

Kaolin and Refractory Clay

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County, Georgia

Washing Tests of Georgia

Clays

Georgia Clay for Paper Fil-

lers

Georgia Clays for Rubber

Fillers

Use of Sedimentary Kaolins

of Georgia in Whitewares

Distribution of Kaolin and

Bauxite of the Coastal

Plain of Georgia

Directory of Commercial

Minerals in Georgia and

Alabama Along Central of

Georgia Railway

Central of Georgia Railway

Industrial Department

J. M. Mallory

General Industrial Agent

413 West Liberty St.

Savannah, Ga.

If You Buy, Sell or Raise AGRICULTURAL PRODUCTS

This Profitable Suggestion Will Interest You

THERE is an intensive and extensive development of agriculture, adjoining West Palm Beach, which offers big opportunity to men who plant on a large scale for market, or for processing; for those as well who buy farm products for re-sale.

All-year enterprise is established in both the Everglades and Coastal "sand farms." See it as part of your summer vacation, enjoying the ocean, lake and land recreations as well.

Many opportunities are here; see how they apply to your own business.

For information or for descriptive booklet address City Dept. of Information, P. O. Drawer B-58

WEST PALM BEACH, Florida

Iron and Steel

and Their Products have long been the major industrial development of the State, and the only similar operation in the South. Blast furnaces and rolling mills have centered around the iron, coal, and limestone deposits of the Birmingham district, and at Gadsden and Alabama City. Principal operators are: T. C. I. & R. R. Co. and the American Steel & Wire Co. (both subsidiaries of U. S. Steel), Republic Iron & Steel Co., Woodward Company, Sloss-Sheffield Steel & Iron Co. (all at or near Birmingham), Gulf States Steel Co. at Alabama City, and Central Iron & Coal Co., at Holt.

This is an extract from a comprehensive survey of Alabama, made by the Alabama Industrial Development Board. Copies of this survey will be furnished responsible individuals upon request. Address: Alabama Industrial Development Board, Brown - Marx Building, Birmingham, Ala.

●

This advertisement published through the courtesy of the Alabama Power Company, whose New Industries Division is actively cooperating with the Alabama Industrial Development Board in finding profitable locations for new industries in Alabama.

●

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Le Baron, E. T., Jacksonville, Fla.

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Lindley, Claude H., Jackson, Miss.
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Wheeler, Walter H., Minneapolis, Minn.
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—(Golf Course, Landscape.)

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—Sluicing Systems.

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Allen-Sherman-Hoff Co., Phila., Pa.

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—Filler.

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—(Rock.)

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Ernst & Ernst, New York, N. Y.
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Harnischfeger Corp., Milwaukee, Wis.
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Century Trust Co., Baltimore, Md.
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First and Merchants National Bank, Richmond, Va.
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Gulf States Steel Co., Birmingham, Ala.
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Ryerson & Son, Inc., Jos. T., St. Louis, and New York.
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—(Line Shaft.)

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—(Roller.)

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Timken Roller Bearing Co., Canton, Ohio.

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Morse Chain Co., Ithaca, N. Y.

—(Leather, Canvas, Rubber.)

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Charlotte Leather Belting Co., Charlotte, N. C.
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Dixon Crucible Co., Jos., Jersey City, N. J.

—Conveyors.

Barber-Greene Co., Aurora, Ill.

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Angle Steel Stool Co., Plainwell, Mich.

—Drawers (Steel.)

Angle Steel Stool Co., Plainwell, Mich.

BENCHES and TABLES.

(Steel.)

Angle Steel Stool Co., Plainwell, Mich.

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Republic Iron Corp., Youngstown, Ohio.
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Angle Steel Stool Co., Plainwell, Mich.

—(Steel Loading.)

Blaw-Knox Co., Pittsburgh, Pa.
Butler Bin Co., Waukesha, Wis.

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Hercules Powder Co., Inc., Wilmington, Del.

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Wilson Corp., The J. G., New York.

BLOCKS (Chain.)

Harrington Co., The, Philadelphia, Pa.

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Patterson Co., W. W., Pittsburgh.

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Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
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Combustion Engr. Corp., New York, N. Y.
Hedges Walsh Welding Co., Chattanooga, Tenn.
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—(Used.)

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—Tubes.

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National Tube Co., Pittsburgh, Pa.
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—Tubes (Charcoal, Iron.)

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Republic Iron Corp., Youngstown, Ohio.
Russell, Burdall & Ward Bolt & Nut Co., Fort Chester, N. Y.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Track.)

Sweet's Steel Co., Williamsport, Pa.

BOND BUYERS.

Garraway & Co., S. G., Chicago.
Hanchett Bond Co., Inc., The, Chicago.
Law & Co., A. M., Spartanburg, S. C.
Marx & Co., Birmingham, Ala.

Mercantile Trust Co., Baltimore, Md.
Nuveen & Co., John, Chicago, Ill.
Provident Savings Bank and Trust Co., Cincinnati, Ohio.
Robinson-Humphrey Co., Atlanta, Ga.
Seasongood & Mayer, Cincinnati, Ohio.
Taylor, Wilson & Co., Inc., Cincinnati, Ohio.

BORING (Core.)

Mott Core Drilling Co., Huntington, W. Va.
Pennsylvania Drilling Co., Pittsburgh, Pa.
Southern Drilling Co., Saltville, Va.
Sprague & Henwood, Inc., Scranton, Pa.

BOXES (Paper.)

Old Dominion Box Co., Lynchburg, Va.

BRASS GOODS.

Chase Brass & Copper Co., Waterbury, Conn.
Copper and Brass Research Assn., New York.
Mueller Co., Decatur, Ill.

BRICK (Common Building.)

Friend & Co., Inc., Petersburg, Va.

—(Face.)

Alabama Clay Prod. Co., Birmingham.

—(Fire.)

Alabama Clay Prod. Co., Birmingham.
Cambria Clay Products Co., Blackfork, O.
Dee Co., Wm. E., Oak Hill, Ohio.
Taylor Sons Co., Charles, Cincinnati.

—(Vitrified, Paving.)

Natl. Paving Brick Mfrs. Assn., Washington, D. C.

—and Clayworking Machy.

Steel & Sons, J. C., Statesville, N. C.

BRIDGE (Asphalt Planking.)

Serviced Premoulded Products, Inc., Chicago, Ill.

—Operating Machinery

Earle Gear & Machine Co., Phila., Pa.

—Timber.

Amer. Creosoting Co., Louisville, Ky.
Industrial Lumber Co., Elizabeth, La.

BRIDGES (Concrete.)

Atlantic Bridge Co., Greensboro, N. C.

—(Creosoted Wood.)

Atlantic Bridge Co., Greensboro, N. C.

—(Steel.)

American Bridge Co., New York, N. Y.
Atlantic Bridge Co., Greensboro, N. C.
Belmont Iron Works, Philadelphia, Pa.
Champion Bridge Co., Wilmington, O.
Converse Bridge & Steel Co., Chattanooga, Tenn.
Ingalls Iron Works Co., Birmingham, Ala.
McClintic-Marshall Co., Pittsburgh, Pa.
Nashville Bridge Co., Nashville, Tenn.
Richmond Struc. Steel Co., Richmond, Va.
Virginia Bridge & Iron Co., Roanoke, Va.

BRONZE (Architectural.)

Heath Company, J. S., Waukegan, Ill.

—(Machine.)

Moecasin Brushing Co., Chattanooga, Tenn.

BUBBLERS.

Rundie-Renue Mfg. Co., Milwaukee, Wis.
Taylor Co., Halsey W., Warren, Ohio.

BUCKETS (Clam Shell.)

Blaw-Knox Co., Pittsburgh, Pa.
Hayward Co., The, New York, N. Y.
Industrial Brownhoist Corp., Cleveland, O.
Owen Bucket Co., The, Cleveland, Ohio.

—(Dredging, Excavating, Sewer, etc.)

Hayward Co., The, New York, N. Y.
Monaghan Mfg. Corp., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.
Stuebner Iron Works, G. L., Long Island City, N. Y.

—(Elevator.)

Hendrick Mfg. Co., Carbondale, Pa.
Webster & Weller Mfg. Companies, Chicago, Ill.

—(Orange Peel.)

Hayward Co., The, New York, N. Y.

—(Ore Handling.)

Hayward Co., The, New York, N. Y.
Owen Bucket Co., The, Cleveland, Ohio.
Stuebner Iron Works, G. L., Long Island City, N. Y.

BUILDERS and Contractors.

Barstow & Co., W. S., Reading, Pa.
Moyer Co., Tighman, Allentown, Pa.
Stone & Webster, Inc., Boston, Mass.
Thompson & Bros., T. C., Charlotte, N. C.
White Engineering Corp., J. G., New York.

BUILDINGS (Industrial.)

Belmont Iron Works, Philadelphia, Pa.
Blaw-Knox Co., Pittsburgh, Pa.
Bradley Steel Corp., Tulsa, Okla.
Butler Mfg. Co., Kansas City, Mo.
Maryland Metal Building Co., Balto., Md.
McClintic-Marshall Co., Pittsburgh, Pa.
Nashville Bridge Co., Nashville, Tenn.
Trucon Steel Co., Youngstown, Ohio.
Virginia Bridge & Iron Co., Roanoke, Va.

(Portable Sheet Metal.)

Bradley Steel Corp., Tulsa, Okla.
Butler Mfg. Co., Kansas City, Mo.
Maryland Metal Building Co., Balto., Md.

BULKHEADS.

Shore-Line Builders, Inc., Jacksonville, Fla.
Snare Corp., Frederick, New York, N. Y.

BULLDOZERS.

Beatty Machine & Mfg. Co., Hammond, Ind.
Trackson Co., Milwaukee, Wis.

BUSHINGS (Brass and Bronze.)

Moccasin Bushing Co., Chattanooga, Tenn.

BUSINESS METHODS.

Ernst & Ernst, New York, N. Y.

CABINETS (Steel.)

Angle Steel Stool Co., Plainwell, Mich.

CABLES (Stud Link.)

Woodhouse Chain Works, Trenton, N. J.
—(and Wire (Electric).)
American Steel & Wire Co., Balto., Md.
Okonite Co., New York, N. Y.
Roehling's Sons Co., John A., Trenton, N. J.
Western Electric Co., New York City.

CABLEWAYS (Overhead Suspension.)

Broderick & Bascom Rope Co., St. Louis.
Bauerman Bros., Chicago, Ill.

CALCIUM CHLORIDE.

Grasselli Chemical Co., Inc., Birmingham, Ala.
Solvay Sales Corp., New York City.

CAN and Box-Making Machinery

(Tin.)
Bliss Co., E. W., Brooklyn, N. Y.
Robins & Co., A. K., Baltimore, Md.

CANNING MACHINERY.

Robins & Co., A. K., Baltimore, Md.

CAR Loaders and Unloaders.

Barber-Greene Co., Aurora, Ill.
Stephens-Adamson Mfg. Co., Birmingham, Ala.

—Pullers.

Webster & Waller Mfg. Companies, Chicago, Ill.

CARS (Dump, Industrial, Logging and Mine.)

Atlas Car & Mfg. Co., The, Cleveland, O.
Easton Car & Construction Co., Easton, Pa.
Koppel Ind. Car & Equip. Co., Koppel, Pa.
Southern Iron & Equipment Co., Atlanta.

—Steps (Safety.)

Irving Iron Works Co., Long Island City, N. Y.

CASTERS (Truck.)

Service Caster & Truck Co., Albion, Mich.

CASTINGS (Brass, Bronze and Aluminum.)

Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.
Moccasin Bushing Co., Chattanooga, Tenn.

—(Chilled Iron.)

Fuller Lehigh Co., Fullerton, Penna.

—(Gray Iron.)

Columbian Iron Works, Chattanooga, Tenn.
Fuller Lehigh Co., Fullerton, Penna.
Glasmergan Pipe & Fdry. Co., Lynchburg, Va.

Hammond Iron Co., Birmingham, Ala.

Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.

National Cast Iron Pipe Co., Birmingham, Ala.

Roanoke Iron & Bridge Works, Inc., Roanoke, Va.

Salem Fdry. & Mach. Wks., Salem, Va.

U. S. Pipe & Foundry Co., Burlington, N. J.

—(Malleable Iron and Steel.)

Timken Roller Bearing Co., Canton, O.

—(Semi-Steel.)

Salem Fdry. & Machine Works, Salem, Va.

—(Steel.)

Bethlehem Steel Co., Bethlehem, Pa.
Crucible Steel Casting Co., Lansdowne, Delaware Co., Pa.
Deemer Steel Casting Co., New Castle, Del.
Lunkenheimer Co., Cincinnati, Ohio.

CAUSTICIZERS.

Swenson Evaporator Co., Harvey, Ill.

CEMENT (High Temperature.)

Harbison Walker Refractories Co., Pittsburg.

—(Portland.)

Alpha Portland Cement Corp., Birmingham, Ala.
Lehigh Portland Cement Co., New York.
Louisville Cement Co., Louisville, Ky.
Portland Cement Assn., Chicago, Ill.
Universal Atlas Cement Co., New York.

—Guns.

Cement-Gun Co., Inc., Allentown, Pa.

—Machinery.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

CHAIN BLOCKS (See Blocks, Chain.)**CHAINS (Dredge, Quarry, Steam Shovel.)**

Knoxville Iron Co., Knoxville, Tenn.
Woodhouse Chain Works, Trenton, N. J.

—(High Speed Roller.)

Diamond Chain & Mfg. Co., Indianapolis.

—(Silent Drive.)

Diamond Chain & Mfg. Co., Indianapolis.
Morse Chain Co., Ithaca, N. Y.

—(Sprocket.)

Chain Belt Co., Milwaukee, Wis.
Diamond Chain & Mfg. Co., Indianapolis.
Morse Chain Co., Ithaca, N. Y.

—(Welded.)

Woodhouse Chain Works, Trenton, N. J.

CHAIRS (Opera and Theatre.)

Andrews Co., A. R., Chicago, Ill.

Brunswick Seating Works, Lawrenceville, Va.

—and Stools (Steel.)

Angle Steel Stool Co., Plainwell, Mich.

CHEMICALS.

Grasselli Chemical Co., Inc., Birmingham, Ala.

CHEMICAL MACHINERY.

Swenson Evaporator Co., Harvey, Ill.

CHEMICAL TOILETS.

Kaustine Co., Inc., Perry, N. Y.

CHEMISTS, CHEMICAL ENGINEERS (Analytical.)

Barrow-Agee Laboratories, Memphis, Tenn.
Flood & Co., Walter H., Chicago, Ill.
Froehling & Robertson, Inc., Richmond, Va.
Hunt Co., Robert W., Chicago, Ill.
Meigs, Bassett & Slaughter, Phila., Pa.
Picard Laboratories, The, Birmingham, Ala.

Pittsburgh Testing Laboratories, Pittsburgh, Pa.

Southwestern Laboratories, Fort Worth, Texas.

Stillman & Van Stien, New York.

Wiley & Co., Inc., Baltimore, Md.

—(Consulting, Paper Industry.)

Froehling & Robertson, Inc., Richmond, Va.

CHIMNEYS (Concrete.)

Rust Engineering Co., Birmingham, Ala.

—(Radial Brick.)

Rust Engineering Co., Birmingham, Ala.

CHLORIDE ACCUMULATOR.

Electric Storage Battery Co., Phila., Pa.

CHLORINATORS.

Rees, S. P., Atlanta.

CIRCUIT BREAKERS.

I. T. E. Circuit Breaker Co., Phila., Pa.

Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

CITY AND TOWN PLANNING.

Draper, E. S., Charlotte, N. C.

Ludlow Engineers, Winston-Salem, N. C.

CLAMPS (Steel Column.)

Ross Co., H. W., Cincinnati.

CLEANERS (Metal, Waste, General.)

Oakite Products, Inc., New York, N. Y.

CLOCKS (For all purposes.)

Kaiser Klock Co., L. E., Baltimore, Md.

—(Watchman's Portable.)

Davis-Paradis Watchman's Clock Corp., New York, N. Y.
Kaiser Klock Co., L. E., Baltimore, Md.

CLUTCHES (Friction.)

Caldwell Co., Inc., W. E., Louisville, Ky.
Footie Bros. Gear and Mach. Co., Chicago.
Schultz & Son, A. L., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.

COAL (Bituminous.)

Hammond Iron Co., Birmingham, Ala.
Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

—and Ash-Handling Mch.

Allen-Sherman-Hoff Co., Phila., Pa.
Chain Belt Co., Milwaukee, Wis.
Hayward Co., The, New York, N. Y.
Industrial Brownhoist Corp., Cleveland, O.
Northwest Engineering Co., Chicago.
Stephens-Adamson Mfg. Co., Birmingham, Ala.
Webster & Waller Mfg. Companies, Chicago, Ill.

—Bunkers (Cast Iron.)

Allen-Sherman-Hoff Co., Phila., Pa.

—Tipples.

American Bridge Co., New York, N. Y.
Virginia Bridge & Iron Co., Roanoke, Va.

COCKS (Service.)

Merco Nordstrom Valve Co., San Francisco, Calif.

COKE.

Hammond Iron Co., Birmingham, Ala.
Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

COLUMNS (Cast Iron.)

U. S. Pipe & Foundry Co., Burlington, N. J.

COMPRESSORS (Gasoline Extraction.)

Sullivan Machinery Co., Chicago, Ill.

CONCRETE (Accelerators.)

Solvay Sales Corp., New York City.

—Block Machinery.

Blystone Mfg. Co., Cambridge Springs, Pa.

—Block Pallets.

Commercial Shearing & Stamping Co., Youngstown, Ohio.

—Construction (Reinforced.)

Cement-Gun Co., Inc., Allentown, Pa.

Cement Gun Construction Co., Chicago.

Rust Engineering Co., Birmingham, Ala.

—Floor Slabs.

American Cement Tile Mfg. Co., Pittsburgh, Pa.

—Information Only.

Portland Cement Assn., Chicago, Ill.

—Mixers.

Blystone Mfg. Co., Cambridge Springs, Pa.

Chain Belt Co., Milwaukee, Wis.

Dunning & Roebert Press Co., Inc., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

Lansing Co., Lansing, Mich.

—Pipe Machinery (See Pipe Machinery, Concrete.)**—Placing Equipment.**

National Equipment Corp. (Insley Division), Milwaukee, Wis.

—Road Curing.

McEverest, Inc., Los Angeles, Cal.

—Road Hardeners.

Solvay Sales Corp., New York City.

—Roofing Tile.

American Cement Tile Mfg. Co., Pittsburgh, Pa.

CONDENSERS.

Chicago Pneumatic Tool Co., New York.

Ingersoll-Rand Co., New York, N. Y.

Manistee Iron Works Co., Manistee, Mich.

Swenson Evaporator Co., Harvey, Ill.

Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

CONDUITS (Electric, Interior, Steel.)

Western Electric Co., New York City.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

CONTRACTORS (Airports.)

Miller & Assn., Wendell P., Chicago.

—(Bridge.)

Kansas City Bridge Co., Kansas City, Mo.

Snare Corp., Frederick, New York.

—(Drainage and Dredging.)

Arundel Corp., The, Baltimore, Md.

Atlantic Gulf and Pacific Co., New York.

—(Electrical.)

Industrial Electrical Co., Savannah, Ga.

Walker Electrical Co., Atlanta, Ga.

Webb Electric Co., Anderson, S. C.

—(Foundations and Dams.)

Calligan & Co., A. H., Richmond, Va.

Snare Corp., Frederick, New York, N. Y.

—(General.)

Angle-Blackford Co., Greensboro, N. C.
Blair, Algernon, Montgomery, Ala.
Charleston Constructors, Inc., Charleston, S. C.

Cornell-Young Co., Inc., Macon, Ga.
Fiske-Carter Constr. Co., Greenville, S. C.
Gridley Constr. Co., Lee A., Knoxville, Tenn.

Saville, Inc., Allen J., Richmond, Va.
Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.

Snare Corp., Frederick, New York, N. Y.
Stone & Webster, Inc., Boston, Mass.
Thompson & Bros., T. C., Charlotte, N. C.

Tucker & Laxton, Charlotte, N. C.
White Engineering Corp., J. G., New York.

—(Industrial Buildings.)

Angle-Blackford Co., Greensboro, N. C.
Barstow & Co., W. S., Reading, Pa.

Blair, Algernon, Montgomery, Ala.
Fiske-Carter Constr. Co., Greenville, S. C.
Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.

Snare Corp., Frederick, New York, N. Y.
Stone & Webster, Inc., Boston, Mass.
Thompson & Bros., T. C., Charlotte, N. C.

Tucker & Laxton, Charlotte, N. C.
White Engineering Corp., J. G., New York.

—Mill Village.

Hornbuckle Contracting Co., Atlanta, Ga.

—(Plastering.)

Gomez & Co., P. L., Atlanta, Ga.

Jennings & Co., Floyd, Atlanta, Ga.

—(Power Plants.)

Snare Corp., Frederick, New York, N. Y.

—(Railroad.)

Calligan & Co., A. H., Richmond, Va.

Cornell-Young Co., Inc., Macon, Ga.

—(Reinforced Concrete.)

Blair, Algernon, Montgomery, Ala.

Cement Gun Construction Co., Chicago.

Gunite Conc. & Constr. Co., Kansas City.

Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.

Tucker & Laxton, Charlotte, N. C.

—(Road and Street Paving.)

Fiske-Carter Constr. Co., Greenville, S. C.

Gridley Constr. Co., Lee A., Knoxville, Tenn.

Hornbuckle Contracting Co., Atlanta, Ga.

McCrory Co., The J. B., Atlanta, Ga.

—(Sewerage and Waterworks.)

Gridley Constr. Co., Lee A., Knoxville, Tenn.

Hardaway Contracting Co., Columbus, Ga.

Hornbuckle Contracting Co., Atlanta, Ga.

McCrory Co., The J. B., Atlanta, Ga.

Snare Corp., Frederick, New York, N. Y.

Tucker & Laxton, Charlotte, N. C.

—(Swimming Pool.)

Rees, S. P., Atlanta, Ga.

—(Water-Works.)

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

—Machinery and Supplies.

(New.)

Bay City Shovel, Inc., Bay City, Mich.

Weller & Co., Birmingham, Ala.

W-K-M Co., Inc., Houston, Texas.

—Machinery and Supplies.

(Used.)

Christian & Co., J. R., Houston, Tex.

Clapp, Riley & Hall Equip. Co., Chicago, Ill.

Cohen, Chas. F., Lima, O.

Dempster Equip. Co., Knoxville, Tenn.

Equip. Sales & Rentals Co., Pittsburgh.

Grey Steel Products Co., New York.

Guion, Harry P., New York, N. Y.

Johnson & Hoehler, Farmwood, Pa.</

COTTON GIN MACHINERY.

Continental Gin Co., Birmingham, Ala.

—Mill Machinery.

Southern Spindle & Flyer Co., Inc., Charlotte, N. C.

COUNTING APPARATUS.

Veeder-Root, Inc., Hartford, Conn.

COUPLINGS.

Goldens' Fly. & Mach. Co., Columbus, Ga.

—(Shaft.)

Foots Bros. Gear & Machine Co., Chicago.

Wood's Sons Co., T. B., Chambersburg, Pa.

CRANES.

Austin Machinery Corp., Muskegon, Mich.

Buckeye Traction Ditcher Co., Findlay, O.

National Equipment Co. (Insley, Koehring, Parsons), Milwaukee, Wis.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Thew Shovel Co., The, Lorain, Ohio.

—(Crawler.)

Buckeye Traction Ditcher Co., Findlay, O.

Harnischfeger Corp., Milwaukee, Wis.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Thew Shovel Co., The, Lorain, Ohio.

—(Crawling Tractor.)

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Thew Shovel Co., The, Lorain, Ohio.

—(Electric Traveling.)

Harnischfeger Corp., Milwaukee, Wis.

Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.

—(Full Circle Steam and Electric.)

Austin Machinery Corp., Muskegon, Mich.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Thew Shovel Co., The, Lorain, Ohio.

—(Gasoline.)

Buckeye Traction Ditcher Co., Findlay, O.

Harnischfeger Corp., Milwaukee, Wis.

Industrial Brownhoist Corp., Cleveland, O.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Thew Shovel Co., The, Lorain, Ohio.

—(Material Handling.)

Bay City Shovels, Inc., Bay City, Mich.

Industrial Brownhoist Corp., Cleveland, O.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Thew Shovel Co., The, Lorain, Ohio.

Universal Crane Co., Lorain, Ohio.

—(Portable Floor.)

Beatty Machine & Mfg. Co., Hammond, Ind.

—(Traveling, Hand Power.)

Harrington Co., The, Philadelphia, Pa.

CRAWLERS (Tractor.)

Riddell Co., W. A., Bucyrus, Ohio.

Trackson Co., Milwaukee, Wis.

CREOSOTED MATERIALS.

Amer. Creosote Wks., Inc., New Orleans.

Delaware Wood Preserving Co., Phila.

Savannah Creosoting Co., Savannah, Ga.

CREOSOTED TIMBER.

Ayer & Lord Tie Co., Chicago, Ill.

CREOSOTE OIL.

Amer. Creosote Wks., Inc., New Orleans.

Ayer & Lord Tie Co., Inc., Chicago.

CREOSOTING (Wood Materials.)

Amer. Creosote Wks., Inc., New Orleans.

Amer. Creosoting Co., Inc., Louisville, Ky.

Delaware Wood Preserving Co., Phila.

Eppinger & Russell Co., New York, N. Y.

Gulf States Creos. Co., Hattiesburg, Miss.

Pretzman & Sons, J. F., Charleston, S. C.

Savannah Creosoting Co., Savannah, Ga.

Taylor-Colquitt Co., Spartanburg, S. C.

Wales Wood-Preserving Co., Norfolk, Va.

CROSS-ARMS (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.

Amer. Creosoting Co., Inc., Louisville, Ky.

Savannah Creosoting Co., Savannah, Ga.

—(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York, N. Y.

CROSS-TIES (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.

Amer. Creosoting Co., Inc., Louisville, Ky.

Ayer & Lord Tie Co., Inc., Chicago.

Eppinger & Russell Co., New York, N. Y.

Pretzman & Sons, J. F., Charleston, S. C.

Savannah Creosoting Co., Inc., Savannah, Ga.

Taylor-Colquitt Co., Spartanburg, S. C.

—(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York, N. Y.

CRUSHED STONE (Road Concrete and Ballast.)

American Limestone Co., Knoxville, Tenn.

Boxley & Co., W. W., Roanoke, Va.

CRUSHERS (Coal and Coke.)

Fuller Lehigh Co., Fullerton, Pa.

—Rock.

Universal Crusher Co., Cedar Rapids, Iowa.

CRUSHING and Pulverizing Machinery.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Day Pulverizer Co., Knoxville, Tenn.

Fuller Lehigh Co., Fullerton, Pa.

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

Raymond Bros. Impact Pulverizer Co., Chicago, Ill.

Sturtevant Mill Co., Boston, Mass.

Universal Crusher Co., Cedar Rapids, Iowa.

W-K-M Co., Inc., Houston, Texas.

CULVERT PIPE (Cast Iron.)

Amer. Cast Iron Pipe Co., Birmingham.

Cast Iron Pipe Research Assn., Chicago.

Gallion Iron Works & Mfg. Co., Gallion, O.

U. S. Pipe & Foundry Co., Burlington, N. J.

—(Corrugated Metal.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Armo Culvert Mfrs. Assn., Middletown, O.

Dixie Culvert & Metal Co., Atlanta, Ga.

Dixie Culvert Mfg. Co., Little Rock, Ark.

Gallion Iron Works & Mfg. Co., Gallion, O.

Louisiana Corr. Culvert Co., Baton Rouge, La.

Tenn. Metal Culvert Co., Nashville, Tenn.

Western Metal Mfg. Co., Houston, Texas.

CURB PROTECTORS (Steel Bars.)

Truscon Steel Co., Youngstown, O.

CUTTERS (Wire Rope.)

Leschen & Sons Rope Co., A., St. Louis.

CUTTING COMPOUNDS.

Oakite Products, Inc., New York, N. Y.

CYLINDERS (Compressed Air, Gas.)

Janney, Jr., Jos. A., Phila., Pa.

National Tube Co., Pittsburgh, Pa.

DERRICKS and Derrick Fittings.

Clyde Iron Works Sales Co., Duluth, Minn.

Saugen Derrick Co., Chicago, Ill.

DESKS (School.)

Andrews Co., A. H., Chicago, Ill.

—(Steel Factory.)

Angle Steel Steel Co., Plainwell, Mich.

DIFFUSERS.

Swenson Evaporator Co., Harvey, Ill.

DIGESTERS (Welded.)

Swenson Evaporator Co., Harvey, Ill.

DITCHING MACHINERY.

Barber-Greene Co., Aurora, Ill.

Bay City Shovels, Inc., Bay City, Mich.

Buckeye Traction Ditcher Co., Findlay, O.

Harnischfeger Corp., Milwaukee, Wis.

Hayward Co., The, New York, N. Y.

Industrial Brownhoist Corp., Cleveland.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Owen Bucket Co., The, Cleveland, O.

DOORS (Fire.)

Merchant & Evans Co., Philadelphia, Pa.

Richards-Wilcox Mfg. Co., Aurora, Ill.

—(Fireproof, Air Chamber.)

Wilson Corp., The J. G., New York.

—(Freight Elevator.)

Peelle Co., The, Brooklyn, N. Y.

—(Kalamel.)

Moeschl-Edwards Corr. Co., Cincinnati.

—(Rolling, Steel and Wood.)

Kinross Mfg. Co., The, Columbus, Ohio.

Mahon Co., R. C., Detroit, Mich.

Moeschl-Edwards Corr. Co., Cincinnati.

Peelle Co., The, Brooklyn, N. Y.

Wilson Corp., The J. G., New York.

—(Steel.)

Detroit Steel Products Co., Detroit, Mich.

Truscon Steel Co., Youngstown, O.

—(Tubular Steel.)

Bayley Co., Wm., Springfield, O.

DRAFTSMEN'S SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

DRAGLINE EXCAVATORS.

Austin Machinery Corp., Muskegon, Mich.

Bucyrus-Erie Co., Erie, Penna.

Harnischfeger Corp., Milwaukee, Wis.

Monaghan Mfg. Corp., Chicago, Ill.

National Equipment Corp. (Koehring, Insley), Milwaukee, Wis.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

Sauerman Bros., Chicago, Ill.

Thew Shovel Co., The, Lorain, Ohio.

Universal Power Shovel Co., Milwaukee, Wis.

DREDGES (Dipper, Elevator, Hydraulic.)

Bay City Shovels, Inc., Bay City, Mich.

Bucyrus-Erie Co., Erie, Pa.

Elliott Machine Corp., Baltimore, Md.

Morris Machine Wks., Baldwinville, N. Y.

DREDGING (River and Harbor Improvement.)

Arundel Corp., The, Baltimore, Md.

Atlantic Gulf and Pacific Co., New York.

DRILLING CONTRACTORS.

Mott Core Drilling Co., Huntington, W. Va.

Pennsylvania Drilling Co., Pittsburgh, Pa.

Southern Drilling Co., Saltville, Va.

Sprague & Henwood, Inc., Scranton, Pa.

DRILLS (Artesian Well.)

Virginia Machinery & Well Co., Inc., Richmond, Va.

—(Electric.)

Chicago Pneumatic Tool Co., New York.

Sullivan Mch. Co., Chicago.

—(Pneumatic.)

Chicago Pneumatic Tool Co., New York.

Ingersoll-Rand Co., New York, N. Y.

Sullivan Machinery Co., Chicago, Ill.

DRINKING FOUNTAINS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

Taylor Co., Halsey W., Warren, Ohio.

DROP-FORGING MACHINERY.

Blas Co., E. W., Brooklyn, N. Y.

DRYERS (Gravel and Sand.)

Ripley Fdy. & Mch. Co., Ripley, Ohio.

DRY KILNS and Equipment.

Moore Dry Kiln Co., Jacksonville, Fla.

DRYING MACHINERY.

American Process Co., New York, N. Y.

DUMP TRUCK BODIES and HOISTS.

Commercial Shearing & Stamping Co., Youngstown, Ohio.

Easton Car & Construction Co., Easton, Pa.

Lee Trailer & Body Co., Inc., Plymouth, Ind.

DUSTPROOFING (Concrete.)

Solvay Sales Corp., New York City.

Sonneborn Sons, Inc., La., New York.

DYESTUFFS.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

DYNAMITE (Industrial and Agricultural.)

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

Hercules Powder Co., Inc., Wilmington, Del.

ELECTRICAL Instruments and Supplies.

Adams Electric Co., Frank, St. Louis.

General Electric Co., Schenectady, N. Y.

Western Electric Co., New York City.

—Machinery (Generators, Motors, etc., New.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Elliott, Howard C., Miami, Fla.

Fairbanks, Morse & Co., Chicago, Ill.

Howell Electric Motors Co., Howell, Mich.

Rockford Power Machy. Co., Rockford, Ill.

Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

—Machinery (Generators, Motors, etc., Used.)

Belyea Co., Inc., New York City.

Delta Equipment Co., Philadelphia, Pa.

Electric Service Co., Cincinnati, Ohio.

Electrical Equip. Co., Raleigh, N. C.

General Electric Co., Schenectady, N. Y.

Gregory Electric Co., Chicago.

Nashville Industrial Corp., Old Hickory, Tenn.

Nussbaum & Co., Y. M., Ft. Wayne, Ind.

O'Brien Machinery Co., The, Phila., Pa.

Randle Machinery Co., The, Cincinnati, O.

Rockford Power Machy. Co., Rockford, Ill.

Stewart Elec. Co., John A., Cincinnati.

—Machinery Repairing (Motors, Generators, etc.)

Electric Service Co., Cincinnati, Ohio.

Gregory Electric Co., Chicago.

ELECTRIC LIGHTING.

General Electric Vapor Lamp Co., Hoboken, N. J.

ELECTRIC SHOVELS (See Shovels.)**ELEVATOR Cables.**

Leschen & Sons Rope Co., A., St. Louis.

—Enclosures.

Dufur, Baggott & Co., Baltimore, Md.

—(Equalizers.)

Evans Elevator Equalizer Co., Bedford, Ind.

ELEVATORS (Electric.)

American Elevator & Machine Co., Inc., Louisville, Ky.

Miller Co., St. Louis, Mo.

Warsaw Elevator Co., Baltimore, Md.

—(Hand and Belt Power.)

American Elevator & Machine Co., Inc., Louisville, Ky.

Miller Co., St. Louis, Mo.

Warsaw Elevator Co., Baltimore, Md.

—(Hydraulic.)

American Elevator & Machine Co., Inc., Louisville, Ky.

Warsaw Elevator Co., Baltimore, Md.

—(Portable.)

O. K. Clutch & Machy. Co., Columbia, Pa.

ENGINEERS (Airports.)

Jenny, L. Alfred, Dumont, N. J.

MacElwee & Crandall, Inc., Cambridge, Mass.

Miller & Asso., Wendell P., Chicago, Ill.

Shaw Co., Russell B., St. Louis, Mo.

—(Appraisal.)

American Appraisal Co., Milwaukee, Wis.

Bartlett Engrs., Inc., Terrell, San Antonio, Texas.

Battley & Kipp, Inc., Chicago, Ill.

Fay, Spofford & Thorndike, Boston, Mass.

Ford, Bacon & Davis, Inc., New York.

Gannett, Seclye & Fleming, Engineers, Inc., Harrisburg, Pa.

Jenny, L. Alfred, Dumont, N. J.

Lockwood Greene Engrs., Inc., New York City.

Ludlow Engineers, Winston-Salem, N. C.

—(Dams.)

Alpaugh & Sons, Chas. W., Manassas, Va.
 Battery & Kipp, Inc., Chicago, Ill.
 Byllesby Engineering and Management Corp., Chicago, Ill.
 Cooper & Co., Hugh L., New York, N. Y.
 Floyd & Lechridge, Dallas, Texas.
 Gardner & Howe, Memphis, Tenn.
 Hardaway Contracting Co., Columbus, Ga.
 Harza, L. F., Chicago.
 Hedrick Inc., Ira G., Hot Springs Nat'l Park, Ark.
 Lee, William S., Charlotte, N. C.
 Main, Inc., Chas. T., Boston, Mass.
 Sitrine & Co., J. E., Greenville, S. C.
 Tucker & Laxton, Charlotte, N. C.
 Wheeler, Walter H., Minneapolis, Minn.
 White Engr. Corp., J. G., New York.

—(Drainage and Irrigation.)

Floyd & Lechridge, Dallas, Texas.
 Ford, Bacon & Davis, Inc., New York.
 Fuller & McClintock, New York, N. Y.
 Hills Co., George B., Jacksonville, Fla.
 Ludlow Engineers, Winston-Salem, N. C.

—(Efficiency.)

Barstow & Co., W. S., Reading, Pa.
 Ernst & Ernst, New York, N. Y.

—(Electrical.)

Battery & Kipp, Inc., Chicago, Ill.
 Christian, Walter P., Greensboro, N. C.
 Cooper & Co., Hugh L., New York, N. Y.
 Engineering Service Corp., Houston, Texas.
 Hoosier Engineering Co., Chicago, Ill.
 Lee, William S., Charlotte, N. C.
 Lockwood Greene Engrs., Inc., New York City.
 Main, Inc., Chas. T., Boston, Mass.
 Mullergren, Arthur L., Kansas City, Mo.
 Sanderson & Porter, New York, N. Y.
 Stone & Webster, Inc., Boston, Mass.
 Tucker & Laxton, Charlotte, N. C.
 Webb Electric Co., Anderson, S. C.
 White Co., Gilbert C., Durham, N. C.
 Wiley & Wilson, Lynchburg, Va.

—(Electric-Light and Power Plants.)

Barrows, H. K., Boston, Mass.
 Battery & Kipp, Inc., Chicago, Ill.
 Biggs Eng. Co., W. E., Knoxville, Tenn.
 Byllesby Engineering and Management Corp., Chicago, Ill.
 Cooper & Co., Hugh L., New York, N. Y.
 Ford, Bacon & Davis, Inc., New York.
 Lee, William S., Charlotte, N. C.
 Main, Inc., Chas. T., Boston, Mass.
 Mullergren, Arthur L., Kansas City, Mo.
 Sanderson & Porter, New York, N. Y.
 Scofield Engineering Co., Phila., Pa.
 Stone & Webster, Inc., Boston, Mass.
 Tucker & Laxton, Charlotte, N. C.
 White Engineering Corp., J. G., New York.
 White Co., Gilbert C., Durham, N. C.

—(Flood Control.)

Floyd & Lechridge, Dallas, Texas.
 Harza, L. F., Chicago.

—(Gas.)

Byllesby Engineering and Management Corp., Chicago, Ill.
 Ford, Bacon & Davis, Inc., New York.

—(Geological.)

De Kalb, Courtenay, New York City.
 Froehling & Robertson, Richmond, Va.
 Wadleigh & Bailey, Washington, D. C.

—(Harbor Improvements.)

Billingsley, James W., New Orleans, La.
 Engineering Service Corp., Houston, Texas.

—(Heating.)

Battery & Kipp, Inc., Chicago, Ill.
 Biggs Eng. Co., W. E., Knoxville, Tenn.
 Wiley & Wilson, Lynchburg, Va.

—(Hydraulic.)

Alpaugh & Sons, Chas. W., Manassas, Va.
 Barrows, H. K., Boston, Mass.
 Floyd & Lechridge, Dallas, Texas.
 Fuller & McClintock, New York, N. Y.
 Harza, L. F., Chicago.
 Main, Inc., Chas. T., Boston, Mass.

—(Hydro-electric.)

Alpaugh & Sons, Chas. W., Manassas, Va.
 Barrows, H. K., Boston, Mass.
 Battery & Kipp, Inc., Chicago, Ill.
 Byllesby Engineering and Management Corp., Chicago, Ill.
 Cooper & Co., Hugh L., New York, N. Y.
 Harza, L. F., Chicago.
 Lee, William S., Charlotte, N. C.
 Ludlow Engineers, Winston-Salem, N. C.
 Main, Inc., Chas. T., Boston, Mass.
 Mees & Mees, Charlotte, N. C.
 Platt, William M., Durham, N. C.
 Sanderson & Porter, New York, N. Y.
 Scofield Engineering Co., Phila., Pa.
 Sitrine & Co., J. E., Greenville, S. C.
 Tucker & Laxton, Charlotte, N. C.
 White Engineering Corp., J. G., New York.

—(Ice and Refrigerating.)

Engineering Service Corp., Houston, Texas.

—(Railroad.)

Ophuls & Hill, Inc., New York, N. Y.

—(Industrial Plants.)

Barstow & Co., W. S., Reading, Pa.
 Bartlett Engrs., Inc., Terrell, San Antonio, Texas.
 Battery & Kipp, Inc., Chicago, Ill.
 Biggs Eng. Co., W. E., Knoxville, Tenn.
 Billingsley, James W., New Orleans, La.
 Charleston Constructors, Inc., Charleston, S. C.
 Consoer, Older & Quinlan, Inc., Chicago.
 Converse & Co., J. B., Mobile, Ala.
 Fay, Spofford & Thorndike, Boston, Mass.
 Gannett, Seelye & Fleming, Engineers, Inc., Harrisburg, Pa.
 Gardner & Howe, Memphis, Tenn.
 Greiner & Co., J. E., Baltimore, Md.

Herty, Charles H., New York City.
 Hills Co., George B., Jacksonville, Fla.
 Lockwood Greene Engrs., Inc., New York City.
 MacElwaine & Crandall, Inc., Cambridge, Mass.

Main, Inc., Chas. T., Boston, Mass.
 Mees & Mees, Charlotte, N. C.
 Morgan Constr. Co., Worcester, Mass.
 Mullergren, Arthur L., Kansas City, Mo.
 Ophuls & Hill, Inc., New York, N. Y.
 Preacher & Co., Inc., G. Lloyd, Atlanta.
 Sanderson & Porter, New York, N. Y.
 Scofield Engineering Co., Phila., Pa.
 Sitrine & Co., J. E., Greenville, S. C.
 Smith, Elroy G., Augusta, Ga.
 Stone & Webster, Inc., Boston, Mass.
 Turner, C. A. P., Minneapolis, Minn.
 Widmer Engineering Co., St. Louis, Mo.
 Williamson, Lee H., Charlottesville, Va.

—(Industrial Survey.)

Converse & Co., J. B., Mobile, Ala.
 Herty, Charles H., New York City.
 Lockwood Greene Engrs., Inc., New York City.
 Wadleigh & Bailey, Washington, D. C.

—(Inspection and Tests.)

Barrow-Agee Laboratories, Memphis, Tenn.
 Conard & Buzby, Burlington, N. J.
 Dow & Smith, New York, N. Y.
 Flood & Co., Walter H., Chicago, Ill.
 Froehling & Robertson, Inc., Richmond, Va.
 Hunt Co., Robert W., Chicago, Ill.
 Picard Laboratories, Birmingham, Ala.
 Pittsburgh Testing Laboratories, Pittsburgh, Pa.
 Southwestern Laboratories, Ft. Worth, Texas.

—(Landscapes.)

Draper, E. S., Charlotte, N. C.
 Kirby & Co., Raleigh, N. C.
 McCrady Co., John, Charleston, S. C.

—(Lighting.)

Battery & Kipp, Inc., Chicago, Ill.
 Byllesby Engineering and Management Corp., Chicago, Ill.
 Ford, Bacon & Davis, Inc., New York.
 General Electric Vapor Lamp Co., Hoboken, N. J.
 Wiley & Wilson, Lynchburg, Va.

—(Mechanical.)

Battery & Kipp, Inc., Chicago, Ill.
 Charlton & Davis, Ft. Lauderdale, Fla.
 Engineering Service Corp., Houston, Texas.
 Invicta Engineering Co., Birmingham, Ala.
 Lee, William S., Charlotte, N. C.
 Lockwood Greene Engrs., Inc., New York City.
 Main, Inc., Chas. T., Boston, Mass.
 Mees & Mees, Charlotte, N. C.
 Meigs, Bassett & Slaughter, Phila., Pa.
 Sanderson & Porter, New York, N. Y.
 Wiley & Wilson, Lynchburg, Va.

—(Mining. See Engineers, Geological.)**—(Municipal.)**

Bartlett Engrs., Inc., Terrell, San Antonio, Texas.
 Billingsley, James W., New Orleans, La.
 Consoer, Older & Quinlan, Inc., Chicago.
 Dow & Smith, New York, N. Y.
 Gannett, Seelye & Fleming, Engineers, Inc., Harrisburg, Pa.
 Harbub Engr. Co., C. N., Nashville, Tenn.
 Hills Co., George B., Jacksonville, Fla.
 Howerton Engineering Co., Asheville, N. C.
 Knowles, Inc., Morris, Pittsburgh, Pa.
 Ludlow Engineers, Winston-Salem, N. C.
 McCrady Co., The J. B., Atlanta, Ga.
 Spoon & Lewis, Greensboro, N. C.
 White Co., Gilbert C., Durham, N. C.

—(Paving and Roads.)

Billingsley, James W., New Orleans, La.
 Dow & Smith, New York, N. Y.
 Freeland, Roberts & Co., Nashville, Tenn.
 Harbub Engr. Co., C. N., Nashville, Tenn.
 Howerton Engineering Co., Asheville, N. C.
 Ludlow Engineers, Winston-Salem, N. C.
 Platt, William M., Durham, N. C.
 Spoon & Lewis, Greensboro, N. C.
 White Co., Gilbert C., Durham, N. C.

—(Production.)

Scofield Engr. Co., Phila., Pa.

—(Public Service Properties.)

Byllesby Engineering and Management Corp., Chicago, Ill.
 Cooper & Co., Hugh L., New York, N. Y.
 Ford, Bacon & Davis, Inc., New York.
 Fuller & McClintock, New York, N. Y.
 Gannett, Seelye & Fleming, Engineers, Inc., Harrisburg, Pa.
 Knowles, Inc., Morris, Pittsburgh, Pa.
 Main, Inc., Chas. T., Boston, Mass.
 Sanderson & Porter, New York, N. Y.
 Scofield Engineering Co., Phila., Pa.
 Stone & Webster, Inc., Boston, Mass.
 White Engineering Corp., J. G., New York.

—(Railroad.)

Jenny, L. Alfred, Dumont, N. J.
 Mees & Mees, Charlotte, N. C.

—(Reinforced Concrete Bridges, Buildings, etc.)

Atlantic Bridge Co., Greensboro, N. C.
 Battery & Kipp, Inc., Chicago, Ill.
 Fay, Spofford & Thorndike, Boston, Mass.
 Freeland, Roberts & Co., Nashville, Tenn.
 Gardner & Howe, Memphis, Tenn.
 Greiner & Co., J. E., Baltimore, Md.
 Lockwood Greene Engrs., Inc., New York City.
 Main, Inc., Chas. T., Boston, Mass.
 Steel & Leiby, Knoxville, Tenn.
 Tucker & Laxton, Charlotte, N. C.
 Turner, C. A. P., Minneapolis, Minn.
 Wheeler, Walter H., Minneapolis, Minn.

—(Research and Development.)

Invicta Engineering Co., Birmingham, Ala.

—(Sanitary.)

Harza, L. F., Chicago.

—(Sea Walls.)

Ruggles, Charles H., Inc., West Palm Beach, Fla.

—(Sewage Disposal Plants.)

Fuller & McClintock, New York, N. Y.
 Kaustine Co., Inc., Perry, N. Y.
 Ludlow Engineers, Winston-Salem, N. C.
 McCrady Co., The J. B., Atlanta, Ga.
 Platt, William M., Durham, N. C.
 Wiedeman and Singleton, Inc., Atlanta.

—(Sewerage and Waterworks.)

Barrows, H. K., Boston, Mass.
 Conard & Buzby, Burlington, N. J.
 Consoer, Older & Quinlan, Inc., Chicago.
 Ford, Bacon & Davis, Inc., New York.
 Fuller & McClintock, New York, N. Y.
 Hardaway Contracting Co., Columbus, Ga.
 Harbub Engr. Co., C. N., Nashville, Tenn.
 Hills Co., George B., Jacksonville, Fla.
 Howerton Engineering Co., Asheville, N. C.
 Knowles, Inc., Morris, Pittsburgh, Pa.
 Ludlow Engineers, Winston-Salem, N. C.
 Mees & Mees, Charlotte, N. C.
 Pennington, J. R., Carson City, Nev.
 Platt, William M., Durham, N. C.
 Sanderson & Porter, New York, N. Y.
 Spoon & Lewis, Greensboro, N. C.
 Tucker & Laxton, Charlotte, N. C.
 White Co., Gilbert C., Durham, N. C.
 White Engineering Corp., J. G., New York.
 Wiedeman & Singleton, Inc., Atlanta, Ga.
 Williamson, Lee H., Charlottesville, Va.

—(Structural.)

Bartlett Engrs., Inc., Terrell, San Antonio, Texas.
 Freeland, Roberts & Co., Nashville, Tenn.
 Hedrick, Inc., Ira G., Hot Springs Nat'l Park, Ark.
 Hills Company, Geo. B., Jacksonville, Fla.
 Lockwood Greene Engrs., Inc., New York City.
 Turner, C. A. P., Minneapolis, Minn.
 Virginia Bridge & Iron Co., Roanoke, Va.

—(Textile Mills.)

Lockwood Greene Engrs., Inc., New York City.

—(Transmission Lines.)

Hoosier Engineering Co., Chicago, Ill.

—(Ventilating and Heating.)

Biggs Eng. Co., W. E., Knoxville, Tenn.

—(Water Supply.)

Floyd & Lechridge, Dallas, Texas.
 Pennington, J. R., Carson City, Nev.

—(Engines (Compressed Air).)

Dake Engine Co., Grand Haven, Mich.

—(Diesel Type.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Gas and Gasoline.)

Light Mfg. & Fdry. Co., Pottstown, Pa.
 Noro Engine Co., Lansing, Mich.
 Sterling Engine Co., Buffalo, N. Y.
 Wisconsin Motors Co., Milwaukee, Wis.

—(Gas and Oil.)

Chicago Pneumatic Tool Co., New York.

—(Hoisting.)

Clyde Iron Works Sales Co., Duluth, Minn.

—(Marine.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Oil.)

Ingersoll-Rand Co., New York, N. Y.
 Continental Gln Co., Birmingham, Ala.

—(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 Cole Mfg. Co., B. D., Newnan, Ga.
 Loeffel & Co., The James, Springfield, O.
 Lombard Iron Works & Supply Co., Augusta, Ga.
 Morris Machine Works, Baldwinville, N. Y.
 Schofield's Sons Co., J. S., Macon, Ga.

ENVELOPES.

Young & Seldon Co., Baltimore, Md.

ESTIMATORS (Building & Construction.)

Spring, Charles Herbert, Greensboro, N. C.

EVAPORATORS.

Swenson Evaporator Co., Harvey, Ill.

EXCAVATING MACHINERY.

Bay City Shovels, Inc., Bay City, Mich.
 Buckeye Traction Ditcher Co., Findlay, O.
 Bucyrus-Erie Co., Erie, Penna.
 Clyde Iron Works Sales Co., Duluth, Minn.
 Harnischfeger Corp., Milwaukee, Wis.
 Hayward Co., The, New York, N. Y.
 Industrial Brownhoist Corp., Cleveland.
 Monaghan Mfg. Corp., Chicago, Ill.
 National Equipment Corp. (Kochring, Insley, Parsons), Milwaukee, Wis.
 Northwest Engineering Co., Chicago, Ill.
 Owen Bucket Co., The, Cleveland, Ohio.
 Thew Shovel Co., The, Lorain, Ohio.
 Universal Power Shovel Co., Milwaukee, Wis.

EXCAVATORS (Clamshell and Orange Peel.)

Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Thew Shovel Co., Lorain, Ohio.

—(Dragline. See Dragline Excavators.)**—(Trench.)**

Barber-Greene Co., Aurora, Ill.
 Bay City Shovels, Inc., Bay City, Mich.
 Buckeye Traction Ditcher Co., Findlay, O.
 Bucyrus-Erie Co., Erie, Penna.
 Harnischfeger Corp., Milwaukee, Wis.
 Hayward Co., The, New York, N. Y.
 Monaghan Mfg. Corp., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Universal Power Shovel Co., Milwaukee, Wis.

EXHAUST FANS (See Blowers and Exhaust Fans.)**—Systems (See Blowers and Exhaust Fans.)****EXPANSION Joints (Road and Street.)**

Servicised Premoulded Products, Inc., Chicago, Ill.

EXPLOSIVES.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
 Hercules Powder Co., Inc., Wilmington, Del.

FACTORY Management Systems.

Ernst & Ernst, New York, N. Y.

FANS, Exhaust (See Blowers and Exhaust Fans.)**FEED-WATER HEATERS and Purifiers.**

American Water Softener Co., Phila., Pa.

FELT (Building Sheathing.)

Barrett Co., The, New York, N. Y.

FENCE POSTS (Crescoted.)

Ayer & Lord Tie Co., Chicago, Ill.

FENCING Entrance Gates (Iron, Steel and Wire.)

American Steel and Wire Co., Balto., Md.
 Anchor Post Fence Co., Baltimore, Md.
 Page Fence Association, Chicago, Ill.
 Stewart Iron Works Co., Cincinnati, O.
 —(Field and Industrial Wire Woven.)
 American Steel and Wire Co., Balto., Md.
 Anchor Post Fence Co., Baltimore, Md.
 Gulf States Steel Co., Birmingham, Ala.
 Page Fence Association, Chicago, Ill.
 Stewart Iron Works Co., Cincinnati, O.

FERTILIZER MACHINERY.

Raymond Bros., Impact Pulv. Co., Chicago.

FILTER (For Domestic and Industrial Purposes.)

American Water Softener Co., Phila., Pa.
 International Filter Co., Chicago, Ill.
 Rees, S. P., Atlanta.
 Roberts Filter Mfg. Co., Darby (Phila.), Pa.
 Seale & Sons Co., Wm. B., Oakmont, Pa.

FINANCING.

Akers, William, Atlanta, Ga.
 Century Trust Co., Balto., Md.
 Electric Bond & Share Co., New York.
 Equitable Trust Co., New York City.
 Garway & Co., S. G., Chicago.
 Gay & Co., W. G., New York, N. Y.
 Marx & Co., Birmingham, Ala.

FIRE CLAY.

Alabama Clay Products Co., Birmingham.

Cambria Clay Products Co., Blackfork, O.

FIRE EXTINGUISHERS.

Myers & Bro. Co., The F. E., Ashland, O.

FIREPROOF Building Material.

Bannon Pipe Co., Louisville, Ky.
 Robertson Co., H. H., Pittsburgh.

—Doors and Shutters.

Kinnear Mfg. Co., The, Columbus, Ohio.
 Mahon Co., B. C., Detroit, Mich.
 Moench-Edwards Corr. Co., Cincinnati, O.
 Richards-Wilcox Mfg. Co., Aurora, Ill.

FIREPROOFING MATERIAL and Construction.

Peelle Co., The, Brooklyn, N. Y.

FITTINGS (Wire Rope.)

Leschen & Sons Rope Co., A., St. Louis.

FLANGES (Iron and Steel.)

Amer. Cast Iron Pipe Co., Birmingham.

Dart Mfg. Co., E. M., Providence, R. I.

National Cast Iron Pipe Co., Birmingham, Ala.
Taylor Forge & Pipe Wks., Chicago, Ill.
U. S. Pipe & Foundry Co., Burlington, N. J.
Vest Mch Co., Henry, Louisville, Ky.
—and Flanged Fittings.
Grinnell Co., Inc., Providence, R. I.

FLOOR (Asphalt Mastic.)
Barber Asphalt Co., Philadelphia, Pa.
—(Asphalt Plank.)
Servicised Premoulded Products, Inc., Chicago, Ill.

—(Composition.)
Johns-Manville Corp., New York, N. Y.
—(Cork Composition.)
Congoleum-Nairn, Inc., Kearny, N. J.
—(Hardwood, Maple, Oak.)
Nashville Hardwood Flooring Co., Nashville, Tenn.

—(Northern Hard Maple.)
Holt Hardwood Co., Oconto, Wis.

—(Open Steel.)
Blaw-Knox Co., Pittsburgh, Pa.
Irving Iron Works Co., Long Is. City, N. Y.
Kerlow Steel Flooring Co., Jersey City, N. J.

—(Rubber and Cork.)
Congoleum-Nairn, Inc., Kearny, N. J.

—Anchors.
Bull Dog Floor Clip Co., Winterest, Iowa.

—Covering.
Congoleum-Nairn, Inc., Kearny, N. J.

—Hardener (Concrete.)
Pennebora Sons, Inc., L. New York.

—Plates and Stair Treads.
American Pressed Steel Co., Phila., Pa.

Central Iron & Steel Co., Harrisburg, Pa.

Hyerson & Son, Inc., Jos. T., St. Louis and New York.

—Steel (For Concrete Culverts, Roads, Streets.)

Blaw-Knox Co., Pittsburgh, Pa.

—Wax.
Congoleum-Nairn, Inc., Kearny, N. J.

—(Wood) Preservative.
Stonhard Co., Phila., Pa.

FLUSH-TANK SIPHONS.
Kaustine Co., Inc., Perry, N. Y.
Pacific Flush-Tank Co., New York, N. Y.

FLYER PRESSERS.
Southern Spindle & Flyer Co., Charlotte, N. C.

FLYERS.
Southern Spindle & Flyer Co., Charlotte, N. C.

FORGINGS (Drop.)
Vest Mch. Co., Henry, Louisville, Ky.

FORMS, Steel (For Concrete, Culverts, Roads, Streets, Curbs, Sidewalks, Tiles.)
Blaw-Knox Co., Pittsburgh, Pa.

FOUNDATION MASONRY.
Calligan Co., A. H., Richmond, Va.

FOUNDRIES and Machine Shops.

Deemer Steel Casting Co., New Castle, Del.

General Machine Works, York, Pa.

Glamorgan Pipe & Fdry. Co., Lynchburg, Va.

Goldsens' Fdry. & Mch. Co., Columbus, Ga.

Lombard Iron Works & Supply Co., Augusta, Ga.

Moccasin Bushing Co., Chattanooga, Tenn.

FOUNDRY Equipment and Supplies.

Chain Belt Co., Milwaukee, Wis.

Hill & Griffith Co., The, Cincinnati, O.

—Facings (Talc and Soapstone.)

Hill & Griffith Co., The, Cincinnati, O.

FUMIGATORS (Fruit, Nuts, Nursery Stock, etc.)

Union Tank & Pipe Co., Los Angeles, Cal.

FURNACES (Industrial.)

Combustion Engr., Corp., New York City.

—(Water-Cooled.)

Combustion Engr. Corp., New York City.

Fuller Lehigh Co., Fullerton, Pa.

GALVANIZED Products.

Cattle & Bros., Jos. P., Philadelphia, Pa.

—Steel and Iron.

American Rolling Mill Co., Middletown, O.

American Sheet & Tin Plate Co., Pittsburgh, Pa.
Granite City Steel Co., Granite City, Ill.
Republic Iron Corp., Youngstown, Ohio.

GALVANIZING (Hot Dip.)
Bessemer Galvanizing Works, Birmingham.
Cattle & Bros., Jos. P., Philadelphia, Pa.
Newport News Shipbuilding & Drydock Co., Newport News, Va.

GARAGES (Metal.)
Maryland Metal Building Co., Balto., Md.

GARBAGE DISPOSAL SYSTEMS
Seacell Corp., New York, N. Y.

GAS HOLDERS.
Chicago Bridge & Iron Works, Atlanta, Ga.

—Producers.

Gas-O-Flame Stove Works, Port Deposit, Md.

Morgan Construction Co., Worcester, Mass.

Wood & Co., E. D., Philadelphia, Pa.

GASOLINE and KEROSENE.
Gulf Refining Co., Pittsburgh, Pa.

GASOLINE SHOVELS (See Shovels.)

GATES (Automatic Drainage.)

Armco Culvert Mfrs. Assn., Middletown, O.

Dixie Culvert & Metal Co., Atlanta, Ga.

Dixie Culvert Mfg. Co., Little Rock, Ark.

Louisiana Corr. Culvert Co., Baton Rouge, La.

Tenn. Metal Culvert Co., Nashville, Tenn.

Western Metal Mfg. Co., Houston, Texas.

GAUGE GLASSES.
Jenkins Bros., New York, N. Y.

GEARS.

DeLaval Steam Turbine Co., Trenton, N. J.

Earle Gear & Machine Co., Phila., Pa.

Foot Bros. Gear & Mch. Co., Chicago.

General Electric Co., Schenectady, N. Y.

—Cut.

Ohio Gear Co., Cleveland, Ohio.

—(Worm Reduction.)

DeLaval Steam Turbine Co., Trenton, N. J.

Foot Bros. Gear and Mch. Co., Chicago.

GENERATORS, MOTORS (New.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Howell Electric Motors Co., Howell, Mich.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

—(Used.)

Belyea Co., Inc., New York City.

Electrical Equip. Co., Raleigh, N. C.

Gregory Electric Co., Chicago.

Nashville Ind. Corp., Old Hickory, Tenn.

Nussbaum & Co., V. M., Ft. Wayne, Ind.

O'Brien Machinery Co., Phila., Pa.

Randle Machinery Co., The, Cincinnati, O.

Stewart Elec. Co., John A., Cincinnati.

GEOLOGISTS. (See Engineers, Geological.)

GLASS (Art.)

Binswanger & Co., Memphis, Tenn.

Hires Turner Glass Co., Philadelphia, Pa.

—(Plate.)

Binswanger & Co., Inc., Memphis, Tenn.

Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Philadelphia, Pa.

—(Window.)

Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Philadelphia, Pa.

—(Wire.)

Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Phila., Pa.

—(Wire.)

Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Phila., Pa.

—(Wire.)

Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Phila., Pa.

—(Wire.)

Blue Ridge Glass Corp., Kingsport, Tenn.

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Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Phila., Pa.

KETTLES (Pavers and Roofers.)
Honorst Co., Jos., Cincinnati, O.

LADDERS (Rolling.)
Myers & Bro. Co., The F. E., Ashland, O.

—(Wooden.)
Dayton Safety Ladder Co., Cincinnati, O.
Patent Scaffolding Co., Chicago, Ill.

LAMPS (Incandescent.)
General Electric Vapor Lamp Co., Hoboken, N. J.
Western Electric Co., New York City.

LATH (Metal.)
Ingalls Iron Works Co., Birmingham, Ala.

LAWN FURNITURE (Wire.)
Dufur, Raggott & Co., Baltimore, Md.

LIGHTING (Factory and Mill.)
General Electric Vapor Lamp Co., Hoboken, N. J.

—(Fixtures (Electric).)
Western Electric Co., New York City.

LIME RECOVERY SYSTEMS.
Swenson Evaporator Co., Harvey, Ill.

LININGS (Flue, Fire Clay.)
Leo Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.

—(Tube Mill.)
Fuller Lehigh Co., Fullerton, Pa.

LINOLEUM (Battleship, Jaspe.)
Congoleum-Nairn, Inc., Kearny, N. J.

LITHOGRAPHERS and ENGRAVERS.
Smith & Son Co., Oscar T., Baltimore, Md.
Young & Selden Co., Baltimore, Md.

LOADING and UNLOADING MACHINERY (Portable.)
Barber-Greene Co., Aurora, Ill.
Northwest Engineering Co., Chicago, Ill.

LOCOMOTIVES (Compressed Air.)
Porter Co., H. K., Pittsburgh, Pa.

—(Electric.)
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.

—(Fireless Stored Steam.)
Porter Co., H. K., Pittsburgh, Pa.

—(Gasoline.)
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.
Porter Co., H. K., Pittsburgh, Pa.
Whitcomb Co., Geo. D., Rochelle, Ill.

—(Industrial.)
Birmingham Rail & Locomotive Co., Birmingham, Ala.
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.
Porter Co., H. K., Pittsburgh, Pa.
Southern Iron & Equipment Co., Atlanta.
Whitcomb Co., Geo. D., Rochelle, Ill.

—(Mining.)
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.
Porter Co., H. K., Pittsburgh, Pa.
Whitcomb Co., Geo. D., Rochelle, Ill.

—(Railway.)
Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.
Porter Co., H. K., Pittsburgh, Pa.
Southern Iron & Equipment Co., Atlanta.
Whitcomb Co., Geo. D., Rochelle, Ill.

LOGGING MACHINERY.
Clyde Iron Works Sales Co., Duluth, Minn.

LOOM PICK COUNTER
Veeder-Root, Inc., Hartford, Conn.

LUBRICANTS.
Dixon Crucible Co., Jos., Jersey City, N. J.
Gulf Refining Co., Pittsburgh, Pa.

LUBRICATORS (Force Feed.)
Lunkenheimer Co., The, Cincinnati, O.

LUBRICATION SYSTEMS.
Alemite Corp., Chicago, Ill.

LUMBER (Ceiling, Flooring, Siding.)
Industrial Lumber Co., Elizabeth, La.

—(Creosoted.)
Amer. Creosote Wks., Inc., New Orleans, La.
Amer. Creosoting Co., Inc., Louisville, Ky.
Ayer & Lord Tie Co., Inc., Chicago.
Delaware Wood Preserving Co., Phila.
Eppinger & Russell Co., New York, N. Y.

Gulf States Creos. Co., Hattiesburg, Miss.
Pretymann & Sons, J. F., Charleston, S. C.
Savannah Creos. Co., Savannah, Ga.

—(Heavy Construction, Pitch, Pine, etc.)
Industrial Lumber Co., Elizabeth, La.

—(Zinc Meta Arsenite Treated.)
Curtin-Howe Corp., New York City.

MACHINERY (Special.)
Bliss Co., E. W., Brooklyn, N. Y.
Earle Gear & Machine Co., Phila., Pa.
Fermholtz Machinery Co., St. Louis, Mo.
General Machine Works, York, Pa.

—(and Supplies (New and Used).)
Beatty Machine & Mfg. Co., Hammond, Ind.

Relyea Co., Inc., New York City.
Dempster Equip. Co., Knoxville, Tenn.
Electric Service Co., Cincinnati, Ohio.
Equip. Sales & Rentals Co., Pittsburgh.
Heineken Engineering Corp., New York.
Marine Metal & Supply Co., New York.
Nashville Ind. Corp., Old Hickory, Tenn.
O'Brien Machinery Co., The, Phila., Pa.
Randle Machinery Co., The, Cincinnati, O.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Seyfert's Sons, Inc., L. F., Phila., Pa.
Zelnicker Supply Co., W. A., St. Louis.

MACHINE TENDERS (Steel.)
Angle Steel Steel Co., Plainwell, Mich.

—(Tools.)
Ryerson & Son, Inc., Jos. T., St. Louis and New York.

—(Used.)
Delta Equipment Co., Philadelphia, Pa.
O'Brien Machinery Co., Phila., Pa.

MAIL CHUTES.
Cutler Mail Chute Co., Rochester, N. Y.

MARBLE (Producers and Manufacturers.)
Georgia Marble Co., Tate, Ga.

MATERIAL ELEVATORS.
National Equipment Corp. (Insley, C. H. & E.), Milwaukee, Wis.

METAL-Cutting Machinery.
Atkins & Co., E. C., Indianapolis, Ind.
Earle Gear & Machine Co., Phila., Pa.

—(Working Machinery.)
Bliss Co., E. W., Brooklyn, N. Y.

METHANOL (Synthetic Methyl Alcohol.)
Du Pont Ammonia Corp., Wilmington, Del.

MILL MACHINERY and SUPPLIES.
Lombard Iron Works & Supply Co., Augusta, Ga.

MINING MACHINERY.
McLanahan-Stone Machine Co., Hollidaysburg, Pa.

MIXERS.
National Equipment Corp. (Koehring, T. L. Smith, Kwik-Mix), Milwaukee, Wis.

—(Asphalt.)
Erie Machine Shops, Erie, Pa.

—(Hot.)
Koehring Co., Milwaukee, Wis.

—(Plaster.)
Blivstone Mfg. Co., Cambridge Springs, Pa.
Chain Belt Co., Milwaukee, Wis.
Dunning & Boschert Press Co., Syracuse, N. Y.
Jaeger Machine Co., Columbus, Ohio.

MORTAR MIXERS.
Chain Belt Co., Milwaukee, Wis.
Jaeger Machine Co., Columbus, Ohio.

—(Ingredient.)
Louisville Cement Co., Louisville, Ky.

MOTORS (Electric.)
Fairbanks Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Howell Electric Motors Co., Howell, Mich.
Western Electric Co., New York City.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

—(Gasoline.)
Wisconsin Motor Co., Milwaukee, Wis.

MOTOR TRUCKS.
International Harvester Co., of America, Inc., Chicago, Ill.

NAILS (Cut.)
Reading Iron Co., Reading, Pa.

—(and Spikes.)
American Steel & Wire Co., Balto., Md.
Gulf States Steel Co., Birmingham, Ala.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

NATURAL GAS COMPANIES.
(Offering Industrial and Commercial Opportunities.)
Arkansas Natural Gas Corp., Shreveport, La.

OIL (Fuel and Gas.)
Gulf Refining Co., Pittsburgh, Pa.
—(Cups.)
Lunkenheimer Co., The, Cincinnati, O.

ORE-WASHING MACHINERY.
Georgia Iron Works, Augusta, Ga.
McLanahan Stone Machine Co., Hollidaysburg, Pa.

ORNAMENTAL BRONZE WORK.
Heath Co., J. S., Waukegan, Ill.

—(Iron Work.)
Roanoke Iron & Bridge Wks., Roanoke, Va.
Snead Architectural Iron Works, Louisville, Ky.
Southern Engineering Co., Charlotte, N. C.
Stewart Iron Works Co., Cincinnati, O.

PACKING (Asbestos, Metallic, Rubber, Leather, etc.)
Jenkins Bros., New York, N. Y.
Johns-Manville Corp., New York, N. Y.
Republic Rubber Co., Youngstown, Ohio.

PAINT (Aluminum.)
Aluminum Co. of America, Pittsburgh, Pa.

—(Metal Surfaces.)
Aluminum Co. of America, Pittsburgh, Pa.
Dixon Crucible Co., Jos., Jersey City, N. J.

—(Mill White, For Interior.)
Aluminum Co. of America, Pittsburgh, Pa.
Sonneborn Sons, Inc., L., New York.

—(Preservative.)
Cabot, Inc., Samuel, Boston, Mass.
Foster Co., Benjamin, Philadelphia, Pa.

PANELBOARDS.
Adam Elec. Co., Frank, St. Louis.

PARTITIONS (Metal, Folding, Rolling.)
Kinnear Mfg. Co., The, Columbus, Ohio.
Lupton's Sons Co., David, Phila., Pa.
—(Sectionfold, Rolling, Wood.)
Wilson Corp., The, J. G. New York.

PATENT ATTORNEYS.
Buck, Sterling P., Washington, D. C.
Coleman, Watson E., Washington, D. C.
Eaton, Paul B., Charlotte, N. C.
Sasnet, Edward C., Washington, D. C.
Seymour & Bright, Washington, D. C.

PATTERNS (Drawing, etc.)
Haas Pattern Co., A. W., Atlanta, Ga.

PAVING Blocks (Creosoted Wood.)
American Creosote Works, New Orleans.

—(Blocks (Rubber).)
Servicised Pre-moulded Products, Inc., Chicago, Ill.

—(Mixers.)
National Equipment Corp. (Koehring, T. L. Smith), Milwaukee, Wis.

—(Plant (Asphalt).)
Simplicity System Co., Chattanooga, Tenn.

PENSTOCKS.
Chicago Bridge & Iron Works, Atlanta.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Smith Co., S. Morgan, York, Pa.

PERFORATED METAL.
Chicago Perforating Co., Chicago, Ill.
Erdle Perforating Co., Rochester, N. Y.
Harrington & King Perf. Co., Chicago.
Hendrick Mfg. Co., Carbondale, Pa.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.
Nortmann-Duffke Co., Milwaukee, Wis.

PETROLEUM REFINERS.
Gulf Refining Co., Pittsburgh, Pa.

PHOSPHATE ACID.
Davison Chemical Co., Baltimore, Md.

—(Machinery.)
McLanahan-Stone Machine Co., Hollidaysburg, Pa.

PIG-IRON.
Hammond Iron Co., Birmingham, Ala.
Republic Iron Corp., Youngstown, Ohio.

Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

PILE SHOES.
Janney, Jr., Jos. A., Phila., Pa.

PILING (Creosoted.)
Amer. Creosote Wks., Inc., New Orleans.
Amer. Creosoting Co., Inc., Louisville.
Ayer & Lord Tie Co., Inc., Chicago.
Pretymann & Sons, J. F., Charleston, S. C.
Savannah Creosoting Co., Inc., Savannah.
Wales Wood-Preserving Co., Norfolk, Va.

—(Steel Sheet.)
Carnegie Steel Co., Pittsburgh, Pa.
Weninger, Inc., New York, N. Y.
Zelnicker Supply Co., W. A., St. Louis.

PILLOW BLOCKS.
Goldens' Fdry. & Mch. Co., Columbus, Ga.

PIPE.
Albert & Davidson Pipe Corp., Brooklyn, N. Y.
Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.
Birmingham Boiler & Engr. Co., Birmingham, Ala.
Central Pipe & Sup. Co., Charleston, W. Va.
Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.
Hammond Iron Co., Birmingham, Ala.
Hudson Pipe & Sup. Co., Bayonne, N. J.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Power Piping Co., Pittsburgh, Pa.
Smith Corp., A. O., Milwaukee, Wis.

—(Cast Iron.)
Amer. Cast Iron Pipe Co., Birmingham.
Cast Iron Pipe Research Assn., Chicago.
Central Foundry Co., The, New York, N. Y.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
National Cast Iron Pipe Co., Birmingham, Ala.
U. S. Pipe & Foundry Co., Burlington, N. J.

—(Dredge.)
Abendroth & Root Mfg. Co., New York.

—(Hammer-Welded.)
National Tube Co., Pittsburgh, Pa.

—(Iron and Steel.)
Ryerson & Son, Inc., Jos. T., St. Louis and New York.

—(Riveted.)
Abendroth & Root Mfg. Co., New York.

—(Second-Hand.)
Albert & Davidson Pipe Corp., Brooklyn, N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.
Central Pipe & Sup. Co., Charleston, W. Va.

Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.
Hudson Pipe & Supply Co., Bayonne, N. J.
Marine Metal & Supply Co., New York.

—(Spiral Riveted.)
Abendroth & Root Mfg. Co., New York.

Taylor Forge & Pipe Wks., Chicago, Ill.

—(Steel.)
Bethlehem Steel Co., Bethlehem, Pa.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

Power Piping Co., Pittsburgh, Pa.
Republic Iron Corp., Youngstown, Ohio.
Smith Corp., A. O., Milwaukee, Wis.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

—(Wrought Iron.)
Reading Iron Co., Reading, Pa.

—(Benders and Headers.)
Grinnell Co., Inc., Providence, R. I.

—(Bending Machines.)
American Pipe Bending Machine Co., Boston, Mass.

—(Coatings.)
Foster Co., Benjamin, Philadelphia, Pa.

—(Fittings.)
Amer. Cast Iron Pipe Co., Birmingham.

Georgia Iron Works, Augusta, Ga.
Grinnell Co., Inc., Providence, R. I.

—(Lines (Water, Gas & Oil—Riveted or Welded).)
Biggs Boiler Works Co., Akron, Ohio.

Smith Corp., A. O., Milwaukee, Wis.

—(Unions and Joints.)
Dart Mfg. Co., E. M., Providence, R. I.

Smith Corp., A. O., Milwaukee, Wis.

—(Systems (Industrial).)
Grinnell Co., Inc., Providence, R. I.

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Power Piping Co., Pittsburgh, Pa.

PITCH.
Barrett Co., The, New York, N. Y.

PLANERS and Mortisers (Hand and Electric.)
Wappat, Incorporated, Pittsburgh, Pa.

PLATES (Steel.)

Bethlehem Steel Co., Bethlehem, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Granite City Steel Co., Granite City, Ill.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Tennessee Coal, Iron & Railroad Co., Birmingham.

PNEUMATIC TOOLS.

Chicago Pneumatic Tool Co., New York.
Ingersoll-Rand Co., New York, N. Y.

POLES (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.
Amer. Creosoting Co., Inc., Louisville, Ky.
Ayer & Lord Tie Co., Inc., Chicago.
Pretzman & Sons, J. F., Charleston, S. C.
Savannah Creosoting Co., Savannah, Ga.
Taylor-Colquitt Co., Spartanburg, S. C.

(Tubular, Steel.)

National Tube Co., Pittsburgh, Pa.
—(Zinc Meta Arsenite Treated.)
Curtin-Howe Corp., New York City.

POLISHING MACHINERY.

(Wheels, Blocks.)
Carborundum Co., Niagara Falls, N. Y.

PORTABLE HOUSES (Metal.)

Bradley Steel Corp., Tulsa, Okla.
Maryland Metal Building Co., Balto., Md.

POST CAPS.

Duplex Hanger Co., Cleveland, Ohio.

POSTS (Cast Iron, Railway and Highway.)

U. S. Pipe & Foundry Co., Burlington, N. J.

POWER TRANSMISSION MACHINERY.

American Pulley Co., Philadelphia, Pa.
Diamond Chain & Mfg. Co., Indianapolis.
Foots Bros. Gear & Machine Co., Chicago.
Golden's Fdry. & Mch. Co., Columbus, Ga.
Morse Chain Co., Ithaca, N. Y.
O'Brien Machinery Co., Phila., Pa.
Schofield's Sons Co., J. S., Macon, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.
—(Pumps.)
Luitwieler Pumping Engine Co., Rochester, N. Y.

PREHEATERS (Air.)

Combustion Engr. Corp., New York City.

PRESSES, (Baling, Cottonseed Oil, Hydraulic and Power.)

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.
Ripley Foundry & Machine Co., Ripley, O.
—(Hydraulic Wheel.)
Inter-State Fdry. & Mch. Wks., Johnson City, Tenn.
—(Metal Stamping.)
Bliss Co., E. W., Brooklyn, N. Y.

PRINTERS (Book, Catalog, Job.)

Smith & Son Co., Oscar T., Baltimore Md.
Young & Selden Co., Baltimore, Md.

PRODUCER (Gas Machines.)

Gas-O-Flame Store Works, Port Deposit, Md.
Morgan Construction Co., Worcester, Mass.
Wood & Co., B. D., Phila., Pa.

PULLER-JACKS.

Edelblute Co., T. H., Pittsburgh, Pa.

PULLEYS (Friction Clutch.)

Caldwell Co., Inc., W. E., Louisville, Ky.
Schultz & Son, A. L., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.
—(Motor and Machine.)
American Pulley Co., Philadelphia, Pa.
—(Steel Split.)
American Pulley Co., Phila., Pa.
—(Shafting and Hangers.)
American Pulley Co., Phila., Pa.
Foots Bros. Gear & Mch. Co., Chicago.
Golden's Fdry. & Mch. Co., Columbus, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.

PULVERIZED FUEL EQUIPMENT.

Combustion Engr. Corp., New York City.
Fuller Lehigh Co., Fullerton, Pa.

PULVERIZERS (See Crushing and Pulverizing Machinery.)**PUMPING MACHINERY.**

American Well Works, Aurora, Ill.
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
Chain Belt Co., Milwaukee, Wis.
Cook, Inc., A. D., Lawrenceburg, Ind.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Keystone Pump & Drill Co., Beaver Falls, Pa.

Luitwieler Pumping Engine Co., Rochester, N. Y.
Myers & Bro. Co., The F. E., Ashland, Ohio.
National Equipment Corp. (C. H. & E. Division), Milwaukee, Wis.
Platt Iron Works, Dayton, Ohio.
Viking Pump Co., Cedar Falls, Iowa.
Virginia Mch. & Well Co., Richmond, Va.

PUMPS (Air.)

Manistee Iron Works Co., Manistee, Mich.
—(Air Lift.)
Ingersoll-Rand Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.

(Boiler Feed.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
DeLaval Steam Turbine Co., Trenton, N. J.
Erie Pump & Engine Wks., Medina, N. Y.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Manistee Iron Works Co., Manistee, Mich.
Myers & Bro. Co., The F. E., Ashland, O.

(Centrifugal.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Well Works, Aurora, Ill.
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
DeLaval Steam Turbine Co., Trenton, N. J.
Emerson Pump & Valve Co., Alexandria, Va.
Erie Pump & Engine Wks., Medina, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Jaeger Machine Co., Columbus, Ohio.
Layne & Bowler, Inc., Memphis, Tenn.
Manistee Iron Works Co., Manistee, Mich.
Morris Machine Wks., Baldwinville, N. Y.
Novo Engine Co., Lansing, Mich.

(Contractors.)

Emerson Pump & Valve Co., Alexandria, Va.
Erie Pump & Engine Wks., Medina, N. Y.
Novo Engine Co., Lansing, Mich.

(Deep Well.)

American Well Works, Aurora, Ill.
Cook, Inc., A. D., Lawrenceburg, Ind.
Keystone Pump & Drill Co., Beaver Falls, Pa.
Layne & Bowler, Inc., Memphis, Tenn.
Luitwieler Pumping Engine Co., Rochester, N. Y.
Novo Engine Co., Lansing, Mich.

(Diaphragm.)

Novo Engine Co., Lansing, Mich.

(Hydraulic.)

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

(Power.)

American Well Works, Aurora, Ill.
Platt Iron Works, Dayton, Ohio.
Sterling Engine Co., Buffalo, N. Y.

(Pulverized Coal.)

Fuller Lehigh Co., Fullerton, Pa.
—(Rotary.)
Viking Pump Co., Cedar Falls, Iowa.
—(Sand and Dredging.)
Ellicott Machine Corp., Baltimore, Md.
Erie Pump & Engine Wks., Medina, N. Y.
Georgia Iron Works, Augusta, Ga.

(Steam.)

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
Emerson Pump & Valve Co., Alexandria, Va.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Works), New York, N. Y.
Platt Iron Works, Dayton, Ohio.

(Vacuum.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Chicago Pneumatic Tool Co., New York.
Ingersoll-Rand Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.

(Water Works.)

American Well Works, Aurora, Ill.
Layne & Bowler, Inc., Memphis, Tenn.
Manistee Iron Works Co., Manistee, Mich.

PUNCHING AND SHEARING MACHINERY.

Beatty Machine & Mfg. Co., Hammond, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

RACK RAKES.

Newport News Shipbuilding & Drydock Co., Newport News, Va.

RADIATOR ENCLOSURES.

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

RAILINGS (Iron Pipe.)

Pipe Railing Constr. Co., Long Island City, N. Y.

—and Grilles, Iron and Brass, (Banks and Offices.)

Dufur, Baggott & Co., Baltimore, Md.
Ludlow Saylor Wire Co., The St. Louis, Mo.

RAILROAD Equipment and Supplies (New.)

Robinson & Orr, Pittsburgh, Pa.

—Equipment and Supplies (Used.)

Birmingham Rail & Loco. Co., Birmingham.

Equip. Sales & Rentals Co., Pittsburgh.
Levis & Co., Henry, Philadelphia, Pa.
Smith & Co., W. M., Birmingham, Ala.
Southern Iron and Equip. Co., Atlanta.
Zelnicke Supply Co., W. A., St. Louis.

—(Frogs and Switches.)

Bethlehem Steel Co., Bethlehem, Pa.
Frank, M. K., Pittsburgh, Pa.
Koppel Ind. Car & Equip. Co., Koppel, Pa.
Robinson & Orr, Pittsburgh, Pa.

RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)

Atlanta and West Point R. R., Atlanta.
Central of Georgia Rwy., Savannah, Ga.
Missouri - Kansas - Texas Lines, Dallas, Texas.
Missouri-Pacific Lines, St. Louis, Mo.
Model Land Company, Flagler System, St. Augustine, Fla.
Norfolk & Western Railway, Roanoke, Va.
Tennessee Central Railway, Nashville, Tenn.

RAILS (New and Used.)

Birmingham Rail & Locomotive Co., Birmingham, Ala.
Carnegie Steel Co., Pittsburgh, Pa.
Frank, M. K., Pittsburgh, Pa.
Levis & Co., Henry, Philadelphia, Pa.
Perry, Buxton, Doane Co., Philadelphia, Pa.
Robinson & Orr, Pittsburgh, Pa.
Smith & Co., W. M., Birmingham, Ala.
Southern Iron & Equip. Co., Atlanta, Ga.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Weller & Co., Birmingham, Ala.
Zelnicke Supply Co., W. A., St. Louis.

RAILWAYS (Industrial.)

Easton Car & Construction Co., Easton, Pa.
Koppel Ind. Car & Equip. Co., Koppel, Pa.

—(Marine.)

Charleston Dry Dock and Machine Co., Charleston, S. C.

RECEPTACLES (Self-Closing, Waste Paper.)

Whitaker Paper Co., Baltimore, Md.

REELS and SPOOLS. (Pressed Metal.)

American Pulley Co., Philadelphia, Pa.

REFRACATORIES.

Harbison-Walker Refractories Co., Pittsburgh.
Taylor Sons Co., Charles, Cincinnati.

REFRIGERATING Machinery (See Ice and Refrigerating Machinery and Supplies.)

—

REINFORCING for Concrete.

American Steel and Wire Co., Balto., Md.
Carnegie Steel Co., Pittsburgh, Pa.
Connors Steel Co., Birmingham, Ala.
Dietrich Brothers, Baltimore, Md.
Gulf States Steel Co., Birmingham, Ala.
Knoxville Iron Co., Knoxville, Tenn.
Pidgeon-Thomas Iron Co., Memphis, Tenn.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Southern Engineering Co., Charlotte, N. C.
Truscon Steel Co., Youngstown, O.

RESURFACING MATERIALS (Floor, Roof and Roadways.)

Stonhard Co., Phila., Pa.

RETORTS (Special Process—Riveted or Welded.)

Biggs Boiler Works, Akron, Ohio.

RIVER & HARBOR IMPROVEMENTS, (Dredging, Docks, Wharves, etc.)

Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.
Kansas City Bridge Co., Kansas City.

RIVETS.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

ROAD and Street Machinery.

Acme Road Mchry. Co., Frankfort, N. Y.
Adams Co., J. D., Indianapolis, Ind.
Austin-Western Road Mchry. Co., Chicago.
Blaw-Knox Co., Pittsburgh, Pa.
Buffalo-Springfield Roller Co., Springfield, O.
Caterpillar Tractor Co., San Leandro, Cal.
Erie Machine Shops, Erie, Pa.
Huber Mfg. Co., The, Marion, Ohio.
Universal Crane Co., Lorain, Ohio.

—and Street Material.

Bituminous Earth Road Corp., Raleigh, N. C.
Boxley & Co., W. W., Roanoke, Va.
Interstate Amiesite Co., Wilmington, Del.
Kentucky Rock Asphalt Co., Louisville, Ky.
Sloss-Sheffield Steel and Iron Co., Birmingham, Ala.

Truscon Steel Co., Youngstown, O.
Woodstock Slag Corp., Birmingham, Ala.

—Graders and Scrapers.

Acme Road Mchry. Co., Frankfort, N. Y.
Adams Co., J. D., Indianapolis, Ind.
Austin-Western Road Mchry. Co., Chicago.
Caterpillar Tractor Co., San Leandro, Cal.

—Oils and Preservatives.

Gulf Refining Co., Pittsburgh, Pa.

—Reinforcement (Welded Fabric.)

American Steel & Wire Co., Balto., Md.

—Rollers (Steam and Gasoline.)

Acme Road Mchry. Co., Frankfort, N. Y.
Austin-Western Road Mchry. Co., Chicago.
Buffalo-Springfield Roller Co., Springfield, O.
Erie Machine Shops, Erie, Pa.
Galton Iron Works & Mfg. Co., Galton, O.
Huber Mfg. Co., The, Marion, Ohio.

—Rollers (For Concrete Work.)

Macon Concrete Roller Co., Macon, Ga.

—Scarfiers.

Austin-Western Road Mchry. Co., Chicago.
Buffalo-Springfield Roller Co., Springfield, O.

ROOFING (Asphalt, Built-up.)

Barber Asphalt Co., Philadelphia, Pa.

—(Ready Prepared, Felt, Tar, Asbestos, Asphalt.)

Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.

Barrett Co., The, New York, N. Y.

Eternit, Inc., St. Louis, Mo.

Johns-Manville Corp., New York, N. Y.

Service Premoulded Products, Inc., Chicago, Ill.

—and Siding (Composition.)

Eternit, Inc., St. Louis, Mo.

Johns-Manville Corp., New York, N. Y.

—and Siding (Metal.)

American Rolling Mill Co., Middletown, O.

American Sheet and Tin Plate Co., Pittsburgh, Pa.

Moeschl-Edwards Corr. Co., Cincinnati, O.

Pidgeon-Thomas Iron Co., Memphis, Tenn.

Republic Iron Corp., Youngstown, Ohio.

Robertson Co., H. H., Pittsburgh.

Ryerson & Son, Jos. T., St. Louis and New York.

Truscon Steel Co., Youngstown, O.

Youngstown Sheet and Tube Co., Youngstown, O.

—Tile, Cement (Interlocking Flat, Channel Glass.)

American Cement Tile Mfg. Co., Pittsburgh, Pa.

—Tiles.

Amer. Cement Tile Mfg. Co., Pittsburgh.

ROPE (Manila, Sisal, Hemp, etc.)

Broderick & Bascom Rope Co., St. Louis.

—Drives.

Wood's Sons Co., T. B., Chambersburg, Pa.

RULES (Steel.)

Lufkin Rule Co., Saginaw, Mich.

SAND.

Arundel Corp., Baltimore, Md.

Friend & Co., Inc., Petersburg, Va.

SANITARY Drinking Fountains.

Rundie-Spence Mfg. Co., Milwaukee, Wis.

Taylor Co., Halsey W., Warren, Ohio.

SASH (Industrial.)

Detroit Steel Products Co., Detroit, Mich.

Truscon Steel Co., Youngstown, O.

—(Operating Devices.)

Detroit Steel Products Co., Detroit, Mich.

—(Steel, Basement, Ventilating.)

Detroit Steel Products Co., Detroit, Mich.

SAWMILL Machinery.

Schofield's Sons Co., J. S., Macon, Ga.

SAW RIGS.

National Equipment Corp. (C. H. & E. Division), Milwaukee, Wis.

SAWS.

Atkins & Co., Inc., B. C., Indianapolis.

—(Cold Metal.)

Earle Gear and Machine Co., Phila., Pa.

—(Hack.)

Atkins & Co., Inc., E. C., Indianapolis.

—(Portable, Electric, Hand.)

Wappat, Incorporated, Pittsburgh, Pa.

SCAFFOLDING (Wooden.)

Patent Scaffolding Co., Chicago, Ill.

SCALES (Industrial, Platform.)

American Kron Scale Co., New York City.

—(Textile.)

American Kron Scale Co., New York City.

SCHOOLS (Correspondence.)

International Correspondence Schools, Scranton, Pa.

SCOOPS (Hand.)

American Mfg. Co., Chattanooga, Tenn.
—Wheeled.
Riddell Co., W. A., Bucyrus, Ohio.

SCRAPERS (Drag and Wheel.)

Adams Co., J. D., Indianapolis, Ind.
Austin-Western Road Machy. Co., Chicago
Gallon Iron Works & Mfg. Co., Gallon, O.
Sauerman Bros., Chicago, Ill.

SCRAP IRON AND STEEL.

Hunts Sons, M. J., Philadelphia, Pa.
Perry, Buxton, Deane Co., Philadelphia, Pa.
Smith & Co., W. M., Birmingham, Ala.

SCREENING (For Concrete and Road Construction.)

American Limestone Co., Knoxville, Tenn.

SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)

Chicago Perforating Co., Chicago, Ill.
Erdle Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., Carbondale, Pa.
Ludlow Saylor Wire Co., The St. Louis, Mo.
McLanahan-Stone Machine Co., Hollidaysburg, Pa.
Mundt & Sons, Charles, Jersey City, N. J.
Northmann-Duffice Co., Milwaukee, Wis.
Stevens-Adams Mfg. Co., Birmingham, Ala.
Sturtevant Mill Co., Boston, Mass.
Universal Crusher Co., Cedar Rapids, Iowa.

SCREW-Machine Products.

Progressive Mfg. Co., Torrington, Conn.

SCREWS (Machine.)

Progressive Mfg. Co., Torrington, Conn.

SEATING (Churches, Schools, Halls, etc.)

Brunswick Seating Works, Lawrenceville, Va.

SEAWALLS.

Shore-Line Builders, Inc., Jacksonville, Fla.

SEPARATORS (Air.)

Sturtevant Mill Co., Boston, Mass.
—(Dust.)
Raymond Bros., Impact Pulv. Co., Chicago.

SEPTIC TANKS.

Kaustine Co., Inc., Perry, N. Y.

SEWAGE Disposal Apparatus.

Kaustine Co., Inc., Perry, N. Y.
Pacific Flush-Tank Co., New York, N. Y.

SEWER Joint Compounds.

Pacific Flush-Tank Co., New York, N. Y.
Servicised Premoulded Products, Inc., Chicago, Ill.

—Pipe (Vitrified.)

Bannon Pipe Co., Louisville, Ky.
Cambria Clay Products Co., Blackfork, O.
Doe Co., Wm. E., Oak Hill, Ohio.
Lee Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.

SHADES (Offset.)

Hough Shade Corp., Chicago, Ill.

SHAFTING.

Foots Bros., Gear & Mach. Co., Chicago.
Ryerson & Sons, Inc., Jos. T., St. Louis and New York.

—(Cold Rolled.)

Bliss & Laughlin, Inc., Harvey, Ill.

—(Flexible.)

Strand & Co., N. A., Chicago, Ill.

—Material (Tubular.)

National Tube Co., Pittsburgh, Pa.

—(Splined.)

Ohio Gear Co., Cleveland, Ohio.

SHARPENING Stones.

Carborundum Co., Niagara Falls, N. Y.

SHEET Metal Work.

National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.
Skinner Bros. Mfg. Co., St. Louis, Mo.
—Metal Working Machinery.
Bliss Co., E. W., Brooklyn, N. Y.
Whitney Metal Tool Co., Rockford, Ill.
Yoder Co., The, Cleveland, Ohio.
—Steel and Iron.
American Rolling Mill Co., Middletown, O.
American Sheet and Tin Plate Co., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Granite City Steel Co., Granite City, Ill.
Republic Iron Corp., Youngstown, Ohio.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Youngstown Sheet & Tube Co., Youngstown, O.

SHEETS (Asbestos.)

Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.
Eternit, Inc., St. Louis, Mo.
—(Steel—Asbestos Covered).
Robertson Co., H. H., Pittsburgh, Pa.

SHELVING (Unit.)

Lupton's Sons Co., David, Phila., Pa.

SHINGLES (Asbestos.)

Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.
Eternit, Inc., St. Louis, Mo.
—(Stain.)
Cabot, Inc., Samuel, Boston, Mass.

SHORES (Self-Locking, Adjustable.)

Roos, Co., H. W., Cincinnati, Ohio.

SHOVELS (Hand.)

American Mfg. Co., Chattanooga, Tenn.
—(Steam, Gas and Electric Power.)
Bucyrus-Erie Co., Erie, Penna.
Harnischfeger Corp., Milwaukee, Wis.
Industrial Brownhoist Corp., Cleveland, O.
National Equipment Corp. (Koehring, Insley), Milwaukee, Wis.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
The Shovel Co., The, Lorain, Ohio.
Universal Power Shovel Co., Milwaukee, Wis.

SHUTTERS (Steel.)

Merchant & Evans Co., Philadelphia, Pa.
Peelle Co., The, Brooklyn, N. Y.
—(Steel and Wood Bifolding.)
Kinnear Mfg. Co., The, Columbus, Ohio.

SILICATE OF SODA.

Grasselli Chemical Co., Inc., Birmingham, Ala.

SITES (Agricultural.)

West Palm Beach, City of, West Palm Beach, Fla.

—(Manufacturing.)

Alabama Power Co., Birmingham, Ala.
Arkansas Natural Gas Corp., Shreveport, La.
Atlanta and West Point B. R., Atlanta, Ga.
Atlanta, Ga., Industrial Bureau C. of C. Brown & Co., Chattanooga, Tenn.
Central of Georgia Ry., Savannah, Ga.
Central Power & Light Co., San Antonio, Ga.
Galveston City of, Galveston, Texas.
Georgia Power Co., Atlanta, Ga.
Industrial Dallas, Inc., Dallas, Texas.
Jacksonville, City of Jacksonville, Florida.
Kentucky Utilities Co., Louisville, Ky.
Missouri - Kansas - Texas Lines, Dallas, Texas.
Missouri-Pacific Lines, St. Louis, Mo.
Model Land Company, (Flagler System), St. Augustine, Fla.
Norfolk & Western Railway, Roanoke, Va.
Oklahoma City Chamber of Commerce, Oklahoma City, Okla.
Tennessee Central Railway, Nashville, Tenn.
Texas Power & Light Co., Dallas, Texas.

SKYLIGHTS.

Milwaukee Corrugating Co., Milwaukee, Wis.
Robertson Co., H. H., Pittsburgh, Pa.

SLABS (Concrete Floor.)

American Cement Tile Mfg. Co., Pittsburgh, Pa.

—(Concrete Roof.)

American Cement Tile Mfg. Co., Pittsburgh, Pa.

SLAG, For Concrete.

Gloss-Sheffield Steel and Iron Co., Birmingham, Ala.
Woodstock Slag Corp., Birmingham, Ala.

—(Furnace.)

Gloss-Sheffield Steel and Iron Co., Birmingham, Ala.
Woodstock Slag Corp., Birmingham, Ala.

SLINGS (Chain.)

Woodhouse Chain Works, Trenton, N. J.

—(Wire Rope.)

Roebeling's Sons Co., John A., Trenton, N. J.

SLUICE GATES AND APPLIANCES.

Smith Co., S. Morgan, York, Pa.

SMELTERS.

Swenson Evaporator Co., Harvey, Ill.

SNATCH BLOCKS (For Wire and Manila Rope.)

Patterson Co., W. W., Pittsburgh.

SPADES.

American Mfg. Co., Chattanooga, Tenn.

SPEED REDUCERS.

Earle Gear & Mach. Co., Phila., Pa.
Foots Bros. Gear & Mach. Co., Chicago.

Morse Chain Co., Ithaca, N. Y.
Stephens-Adams Mfg. Co., Birmingham, Ala.

SPIKES, (Railroad, Ship.)

Bethlehem Steel Co., Bethlehem, Pa.
Republic Iron Corp., Youngstown, Ohio.
Sweet's Steel Co., Williamsport, Pa.

SPRINGS (Machinery, Railway, Spiral Steel.)

American Steel & Wire Co., Balto., Md.
Raymond Mfg. Co., Corry, Pa.
—(Wire—All Kinds.)
American Steel & Wire Co., Balto., Md.

SPRINKLERS (Automatic Fire.)

Grinnell Co., Inc., Providence, R. I.

SPROCKETS.

Diamond Chain & Mfg. Co., Indianapolis, Ind.
Foots Bros. Gear & Mach. Co., Chicago.
Morse Chain Co., Ithaca, N. Y.

STACKS (Iron and Steel.)

Biggs Boiler Works Co., Akron, Ohio.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge and Iron Works, Atlanta, Ga.
Downingtown Iron Wks., Downingtown, Pa.
Hammond Iron Works, Warren, Pa.
Hedges Walsh Weldner Co., Chattanooga, Tenn.
Ingalls Iron Works Co., Birmingham, Ala.
Lombard Iron Works & Supply Co., Augusta, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schofield's Sons Co., J. S., Mason, Ga.
U. S. Pipe & Foundry Co., Burlington, N. J.
Virginia Bridge & Iron Co., Roanoke, Va.

STAINS (Shingle, Woodwork.)

Cabot, Inc., Samuel, Boston, Mass.

STAIR Steps (Safety.)

Irring Iron Works Co., Long Is. City, N.Y.

—Treads.

Central Iron & Steel Co., Harrisburg, Pa.

STAMPING (Sheet Metal.)

American Pulley Co., Philadelphia, Pa.

—Steel (All Kinds.)

Commercial Shearing & Stamping Co., Youngstown, Ohio.

STANDPIPES.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Works, Atlanta, Ga.
Hammond Iron Works, Warren, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

STATIONERS (Envelopes, Letter and Billheads, etc.)

Smith & Son Co., Oscar T., Baltimore, Md.
Young & Seiden Co., Baltimore, Md.

STEAM SHOVELS.

Bucyrus-Erie Co., Erie, Pa.
The Shovel Co., The, Lorain, Ohio.

—Specialties.

Jenkins Bros., New York, N. Y.
Lunkenheimer Co., The, Cincinnati, O.
Mueller Co., Decatur, Ill.

—Traps.

Jenkins Bros., New York, N. Y.

STEEL.

Bethlehem Steel Co., Bethlehem, Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Crucible Steel Co., of Amer., New York City.
Dietrich Brothers, Baltimore, Md.
Gulf States Steel Co., Birmingham, Ala.
Republic Iron Corp., Youngstown, Ohio.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Alloy.)

Crucible Steel Co. of Amer., New York City.

Timken Roller Bearing Co., Canton, Ohio.

—(Cold Drawn.)

Bliss & Laughlin, Inc., Harvey, Ill.

—(Cold Rolled.)

American Steel & Wire Co., Balto., Md.

Bliss & Laughlin, Inc., Harvey, Ill.

—(Information Only.)

American Institute of Steel Construction, Inc., New York City.

—(Liners for Sewers, Tunnels and Calissons.)

Commercial Shearing & Stamping Co., Youngstown, O.

—(Special Analysis.)

Timken Roller Bearing Co., Canton, Ohio.

—(Tool, High Speed.)

Bethlehem Steel Co., Bethlehem, Pa.

Crucible Steel Co. of Amer., New York City.

—Buildings (Designers and Builders.)

American Bridge Co., New York, N. Y.

Belmont Iron Works, Philadelphia, Pa.

Braden Steel Corp., Tulsa, Okla.

Butler Mfg. Co., Kansas City, Mo.

Carolina Steel & Iron Co., Greensboro, N. C.

Champion Bridge Co., Wilmington, O.

Eichleay, Jr., Co., John, Pittsburgh.

Ingalls Iron Works Co., Birmingham, Ala.

McClintic-Marshall Co., Pittsburgh, Pa.

Phoenix Iron Co., The, Phila., Pa.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Richmond Struc. Steel Co., Richmond, Va.

Virginia Bridge & Iron Co., Roanoke, Va.

—Forms (Curb, Gutter, Side-walk, Road.)

Blaw-Knox Co., Pittsburgh, Pa.

—Plate Construction (Riveted or Welded.)

Biggs Boiler Works Co., Akron, Ohio.

Birmingham Boiler & Engr. Co., Birmingham, Ala.

Carolina Steel & Iron Co., Greensboro, N. C.

Central Iron & Steel Co., Harrisburg, Pa.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Works, Atlanta, Ga.

Combustion Engr. Corp., New York City.

Hammond Iron Works, Warren, Pa.

Hedges Walsh Weldner Co., Chattanooga, Tenn.

Ingalls Iron Works Co., Birmingham, Ala.

Mecklenburg Iron Works, Charlotte, N. C.

Phoenix Iron Co., The, Phila., Pa.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

—Tank Heads.

Commercial Shearing & Stamping Co., Youngstown, Ohio.

STENCIL CUTTING MACHINES.

Diagram Stencil Machine Corp., St. Louis, Mo.

STOKERS (Mechanical.)

Babcock & Wilcox Co., The, New York.

Combustion Engr. Corp., New York City.

STORAGE Batteries.

Electric Storage Battery Co., Philadelphia.

—Bins (Steel.)

Blaw-Knox Co., Pittsburgh, Pa.

Butler Bin Co., Waukesha, Wis.

STRIPS (Steel.)

American Steel & Wire Co., Baltimore.

STRUCTURAL STEEL (Hot Galvanized.)

Bessemer Galvanizing Works, Birmingham.

—and Iron.

American Bridge Co., New York, N. Y.

Belmont Iron Works, Philadelphia, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Carolina Steel & Iron Co., Greensboro, N. C.

Champion Bridge Co., Wilmington, Ohio.

Converse Bridge & Steel Co., Chattanooga, Tenn.

Dietrich Brothers, Baltimore, Md.

Eichleay, Jr. Co., John, Pittsburgh.

Erie Steel Constr. Co., Erie, Pa.

Ingalls Iron Works Co., Birmingham, Ala.

McClintic-Marshall Co., Pittsburgh, Pa.

Nashville Bridge Co., Nashville, Tenn.

Phoenix Iron Co., The, Phila., Pa.

Pidgeon-Thomas Iron Co., Memphis, Tenn.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Republic Iron Corp., Youngstown, Ohio.

Richmond Struc. Steel Co., Richmond, Va.

Roanoke Iron & Bridge Works, Inc., Roanoke, Va.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Sneed Architectural Iron Works, Louisville, Ky.

Southern Engineering Co., Charlotte, N. C.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Virginia Bridge & Iron Co., Roanoke, Va.

SULPHATE OF ALUMINA.

Grasselli Chemical Co., Inc., Birmingham, Ala.

SULPHATE PULP MILLS.

Swenson Evaporator Co., Harvey, Ill.

SULPHIDE OF SODA.

Grasselli Chemical Co., Inc., Birmingham, Ala.

SULPHURIC ACID.

Darvon Chemical Co., The, Balto., Md.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

SUPER-HEATERS (Steam.)

Babcock & Wilcox Co., The, New York.

SURVEYING INSTRUMENTS.

Weber Co., Inc., F., Philadelphia, Pa.

SURVEYORS (Quantity.)

Spring, Charles Herbert, Greensboro, N. C.

SWINGING ENGINES.

Dake Engine Co., Grand Haven, Mich.

SWITCHBOARDS, SWITCHES, ETC.

Adam Elec. Co., Frank, St. Louis.

General Electric Co., Schenectady, N. Y.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

SYSTEMS (Business.)

Ernst & Ernst, New York, N. Y.

TACKLE BLOCKS (For Wire and Manila Rope.)

Patterson Co., W. W., Pittsburgh.

TANKS (Air Compressor.)

Air-Tight Steel Tank Co., Pittsburgh, Pa.

Scalfe & Sons, Wm. B., Oakmont, Pa.
Titusville Iron Works Co., Titusville, Pa.**—(Elevated Steel.)**Caldwell Co., Inc., W. E., Louisville, Ky.
Chicago Bridge & Iron Works, Atlanta, Ga.
Cole Mfg. Co., R. D., Newnan, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Schofield's Sons Co., J. S., Macon, Ga.

Virginia Bridge & Iron Co., Roanoke, Va.

—(Elevated Wood.)Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.
Woolford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.**—(Iron and Steel.)**Air-Tight Steel Tank Co., Pittsburgh, Pa.
American Bridge Co., New York, N. Y.
Biggs Boiler Works Co., Akron, Ohio.
Birmingham Tank Co., Birmingham.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Works, Atlanta, Ga.

Cole Mfg. Co., R. D., Newnan, Ga.

Downingtown Iron Works, Downingtown, Pa.

Hammond Iron Works, Warren, Pa.

Lombard Iron Works & Supply Co., Augusta, Ga.

McClintic-Marshall Co., Pittsburgh, Pa.

Meeklenburg Iron Works, Charlotte, N. C.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Scalfe & Sons, Wm. B., Oakmont, Pa.

Schofield's Sons Co., J. S., Macon, Ga.

Titusville Iron Works Co., Titusville, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Seamless Steel.)

Janney, Jr., Jos. A., Phila., Pa.

National Tube Co., Pittsburgh, Pa.

—(Storage, Oil, etc.)

Biggs Boiler Works, Akron, Ohio.

Birmingham Boiler & Engr. Co., Birmingham, Ala.

Chicago Bridge & Iron Works, Atlanta, Ga.

Downingtown Iron Works, Downingtown, Pa.

Hammond Iron Works, Warren, Pa.

Ingalls Iron Works Co., Birmingham, Ala.

Meeklenburg Iron Works, Charlotte, N. C.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Titusville Iron Works Co., Titusville, Pa.

—(Wood.)

Caldwell Co., Inc., W. E., Louisville, Ky.

Davis & Son, G. M., Palatka, Fla.

Virginia Mch. & Well Co., Richmond, Va.

Woolford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.

—(Wood Pickling.)

Woolford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.

TAPE (Insulating.)

Okonite Co., New York, N. Y.

—(Measuring.)

Lufkin Rule Co., Saginaw, Mich.

TAX SPECIALISTS.

Ernst & Ernst, New York, N. Y.

Le Baron, Ernest T., Jacksonville, Fla.

TELEPHONE SERVICE.

American Telephone & Telegraph Co.

TERRA COTTA (Ornamental.)

Atlanta Terra Cotta Co., Atlanta, Ga.

TEXTILE CHEMICALS.

Grasselli Chemical Co., Inc., Birmingham, Ala.

TILE (Cement Roofing.)

American Cement Tile Mfg. Co., Pittsburgh, Pa.

—(Cork Composition.)

Congoleum-Nairn, Inc., Kearny, N. J.

—(Cork Flooring.)

Congoleum-Nairn, Inc., Kearny, N. J.

—(Hollow Building.)

Cambria Clay Products Co., Blackfork, Ohio.

—(Roof.)

Hood Co., R. Mifflin, Daisy, Tenn.

—(Rubber.)

Congoleum-Nairn, Inc., Kearny, N. J.

—(Sewer.)

Lee Clay Products Co., Clearfield, Ky.

TIMBER Fittings.

Duplex Hanger Co., Cleveland, Ohio.

—(Creosoted.)

Amar. Creosote Wks., Inc., New Orleans.

Amar. Creosoting Co., Inc., Louisville, Ky.

Pretymann & Sons, J. F., Charleston, S. C.

TIME RECORDERS.

Kaiser Klock Co., L. E., Baltimore, Md.

TIN AND TERNE PLATES.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.

Granite City Steel Co., Granite City, Ill.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

TOBACCO MACHINERY.

Ripley Foundry & Machine Co., Ripley, O.

TOILET TISSUE.

Victoria Paper Mills Co., Fulton, N. Y.

TOOLS (Measuring.)

Lufkin Rule Co., Saginaw, Mich.

—(Woodworking—Portable.)

Electric, Hand.)

Wappat, Incorporated, Pittsburgh, Pa.

TORCHES (Blow.)

Wall Mfg. Supply Co., P., Pittsburgh, Pa.

—(Kerosene.)

St. Paul Welding & Mfg. Co., St. Paul, Minn.

TOWERS (Electric Transmission.)

American Bridge Co., New York, N. Y.

Bessemer Galvanizing Works, Birmingham.

Nashville Bridge Co., Nashville, Tenn.

—(Radio.)

Bessemer Galv. Wks., Birmingham, Ala.

—(Steel and Wood.)

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Cole Mfg. Co., R. D., Newnan, Ga.

TRACK (Portable or Permanent.)

Sweet's Steel Co., Williamsport, Pa.

TRACTORS (Industrial.)

Atlas Car & Mfg. Co., The, Cleveland, O.

Caterpillar Tractor Co., San Leandro, Cal.

Clark Tractor Co., Battle Creek, Mich.

Cleveland Tractor Co., Cleveland, Ohio.

International Harvester Co., of America, Inc., Chicago, Ill.

—(Road.)

Caterpillar Tractor Co., San Leandro, Cal.

Cleveland Tractor Co., Cleveland, Ohio.

—Attachments (Side Boom.)

W-K-M Co., Inc., Houston, Texas.

TRAILERS. (Four Wheel.)

Electric Wheel Co., Quincy, Ill.

—(Heavy Duty.)

Electric Wheel Co., Quincy, Ill.

—(Industrial.)

Easton Car & Construction Co., Easton, Pa.

—(Pole.)

Electric Wheel Co., Quincy, Ill.

TRAMWAYS (Aerial Wire Rope.)

American Steel & Wire Co., Balto., Md.

Broderick & Bascom Rope Co., St. Louis.

Leschen & Sons Rope Co., A., St. Louis.

TRANSFORMERS.

General Electric Co., Schenectady, N. Y.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

—(Used.)

Electric Service Co., Cincinnati, Ohio.

TRANSMISSION TOWERS (Galvanized.)

Bessemer Galvanizing Works, Birmingham.

McClintic-Marshall Co., Pittsburgh, Pa.

TRENCH MACHINERY. See Excavators (Trench.)**TRESTLES (Wooden.)**

Patent Scaffolding Co., Chicago, Ill.

TRI-SODIUM PHOSPHATE.

Grasselli Chemical Co., Inc., Birmingham, Ala.

TROLLEY WHEELS (Self Oiling.)

Moccasin Bushing Co., Chattanooga, Tenn.

TRUCK CRANES.

Universal Crane Co., Lorain, O.

TRUCKS (Dry Kiln.)

Moore Dry Kiln Co., Jacksonville, Fla.

—(Industrial.)

Atlas Car & Mfg. Co., The, Cleveland, O.

Clark Tractor Co., Battle Creek, Mich.

Lansing Co., Lansing, Mich.

Nutting Truck Co., Chicago, Ill.

Service Carter & Truck Co., Albion, Mich.

—(Motor.)

International Harvester Co., of America, Inc., Chicago, Ill.

—(Platform, Freight, Mill, Factory, etc.)

American Pulley Co., Philadelphia, Pa.

Clark Tractor Co., Battle Creek, Mich.

Electric Wheel Co., Quincy, Ill.

Nutting Truck Co., Chicago, Ill.

Service Carter & Truck Co., Albion, Mich.

Trucon Steel Co., (Pressed Steel Division) Cleveland, Ohio.

—(Steel Shop.)

Angle Steel Steel Co., Plainwell, Mich.

TUBES (Boiler.) See Boiler Tubes.**TUBING (Metal.)**

Boiler Tube Co., of America, Pittsburgh.

—(Seamless Steel.)

National Tube Co., Pittsburgh, Pa.

Timken Rolling Bearing Co., Canton, O.

TURBINES (Hydraulic.)

Cook, Inc., A. D., Lawrenceburg, Ind.

Jettel & Co., The, James, Springfield, O.

Smith Co., S. Morgan, York, Pa.

—(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

DeLaval Steam Turbine Co., Trenton, N. J.

General Electric Co., Schenectady, N. Y.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

TURNBUCKLES.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

TURNABLES.

American Bridge Co., New York, N. Y.

Easton Car & Construction Co., Easton, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

—(Portable for Motor Trucks.)

Blaw-Knox Co., Pittsburgh, Pa.

UNIONS.

Dart Mfg. Co., E. M., Providence, R. I.

UNIT HEATERS.

Grinnell Co., Inc., Providence, R. I.

Skinner Bros., Mfg. Co., St. Louis, Mo.

VALVES.

Columbian Iron Works, Chattanooga, Tenn.

Jenkins Bros., New York, N. Y.

Ludlow Valve Mfg. Co., The, Troy, N. Y.

Lunkenheimer Co., The, Cincinnati, Ohio.

Merco Nordstrom Valve Co., San Francisco, Cal.

Mueller Co., Decatur, Ill.

Vogt Brothers Mfg. Co., Louisville, Ky.

Vogt Machine Co., Henry, Louisville, Ky.

Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Acid Proof.)

Lunkenheimer Co., The, Cincinnati, O.

—(Gate.)

Ludlow Valve Mfg. Co., The, Troy, N. Y.

Lunkenheimer Co., The, Cincinnati, Ohio.

Wood & Co., R. D., Philadelphia, Pa.

VENTILATING SYSTEMS.

Skinner Bros. Mfg. Co., St. Louis, Mo.

Swartwout Co., Cleveland, Ohio.

VENTILATORS (Roof.)

Merchant & Evans Co., Philadelphia, Pa.

Milwaukee Corrugating Co., Milwaukee, Wis.

Robertson Co., H. H., Pittsburgh, Pa.

—(Rotary.)

Swartwout Co., Cleveland, Ohio.

WALL HANGERS.

Duplex Hanger Co., Cleveland, Ohio.

WARDROBES (Hygienic, School.)

Wilson Corp., The, J. G., New York.

WATCHMAN'S PORTABLE CLOCKS.

Davis-Paradis Watchman's Clock Corp., New York, N. Y.

Kaiser Klock Co., L. E., Balto., Md.

WATERPROOFING (For Brick, Concrete, Granite.)

Anhalt Products Co., Syracuse, N. Y.

Foster Co., Benjamin, Philadelphia, Pa.

Serviced Premoulded Products, Inc., Chicago, Ill.

Solvay Sales Corp., New York City.

Sennoborn, Sons, Inc., L., New York.

WATER Purification.

Roberts Filter Mfg. Co., Darby (Phila.), Pa.

Scalfe & Sons, Wm. B., Oakmont, Pa.

—Softening Apparatus (Purifying.)

American Water Softener Co., Phila., Pa.

International Filter Co., Chicago, Ill.

—Works Supplies and Appliances.

Amer. Cast Iron Pipe Co., Birmingham.

Cast Iron Pipe Research Assn., Chicago.

Columbian Iron Works, Chattanooga, Tenn.

Cook, Inc., A. D., Lawrenceburg, Ind.

Giamorgan Pipe & Fdry. Co., Lynchburg, Va.

Leadite Co., The, Philadelphia, Pa.

Mueller Co., Decatur, Ill.

U. S. Pipe & Foundry Co., Burlington, N. J.

Wood & Co., R. D., Philadelphia, Pa.

WELDING APPARATUS (Electric Arc.)

General Electric Co., Schenectady, N. Y.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

—Apparatus (Oxy-Acetylene.)

St. Paul Welding & Mfg. Co., St. Paul, Minn.

WELL CONTRACTORS (Oil, Artesian, etc.)

Virginia Mach. & Well Co., Richmond, Va.

WHEELBARROWS.

Lansing Co., Lansing, Mich.

Sterling Wheelbarrow Co., Milwaukee.

WHEELS AND AXLES.

Carnegie Steel Co., Pittsburgh, Pa.

WINCHES.

Saggen Derrick Co., Chicago, Ill.

Schultz & Son, A. L., Chicago, Ill.

WINDOW Frames and Sash (Metal.)

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Lupton's Sons Co., David, Phila., Pa.

Trucon Steel Co., Youngstown, O.

WINDOWS. (Steel Basement, Casement.)

Bayley Co., The, William, Springfield, O.

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Lupton's Sons Co., David, Phila., Pa.

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Detroit Steel Products Co., Detroit, Mich.

Lupton's Sons Co., David, Phila., Pa.

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Bayley Co., The, William, Springfield, O.

—(Ventilating.)

Bayley Co., The, William, Springfield, O.

Detroit Steel Products Co., Detroit, Mich.

Lupton's Sons Co., David, Phila., Pa.

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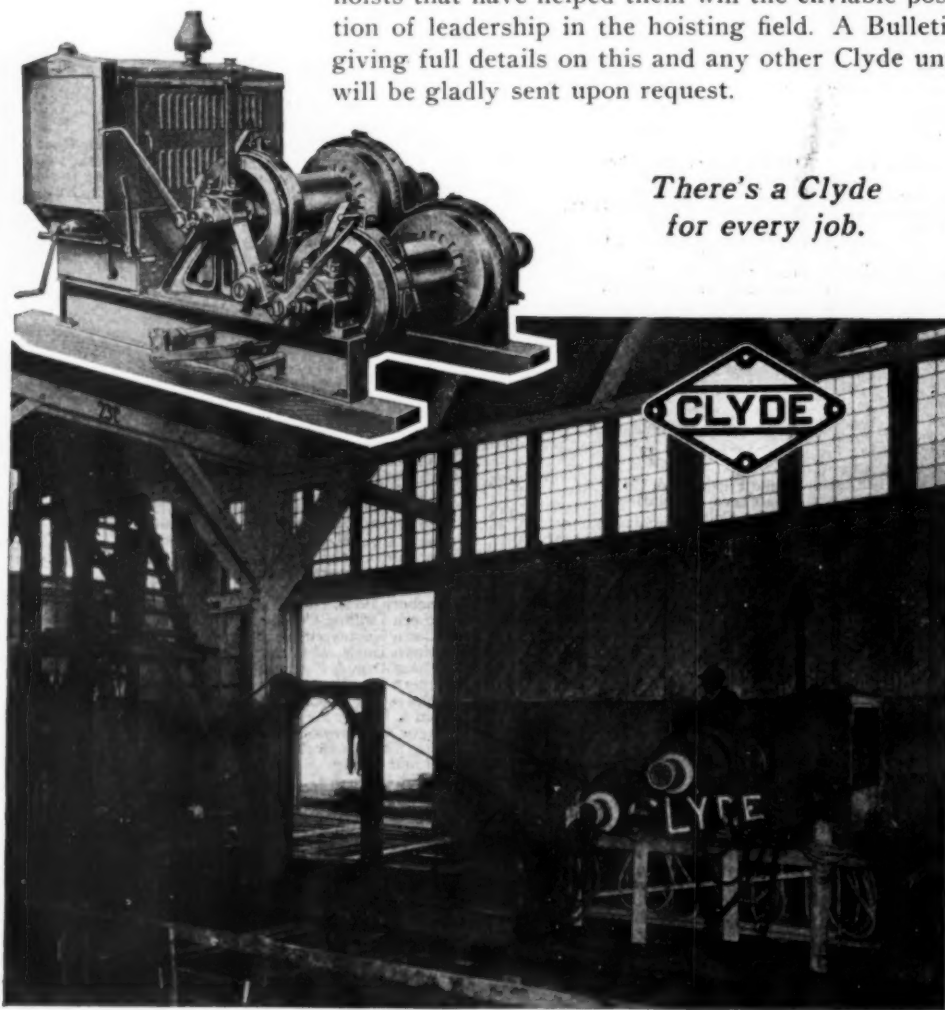
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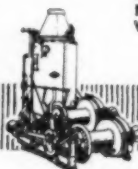
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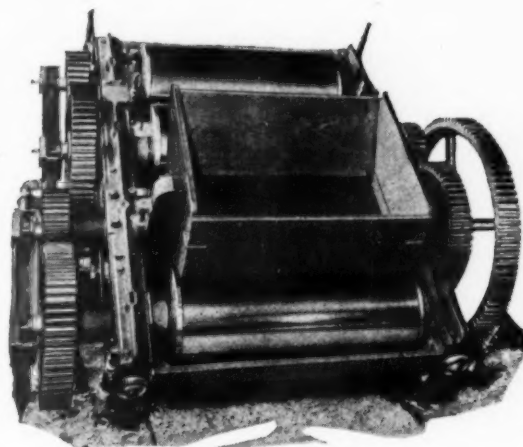


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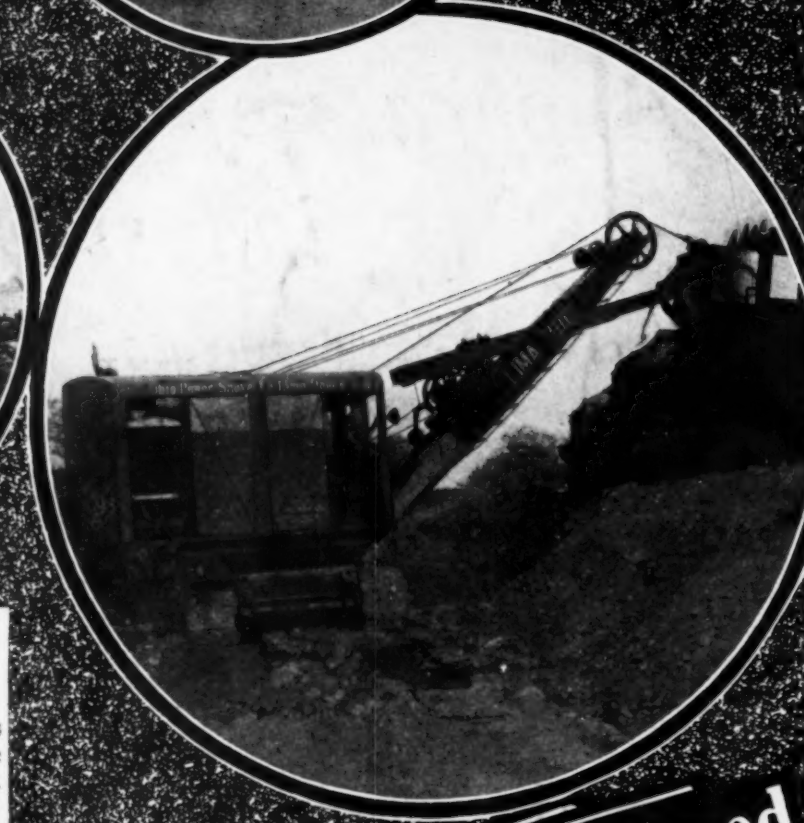
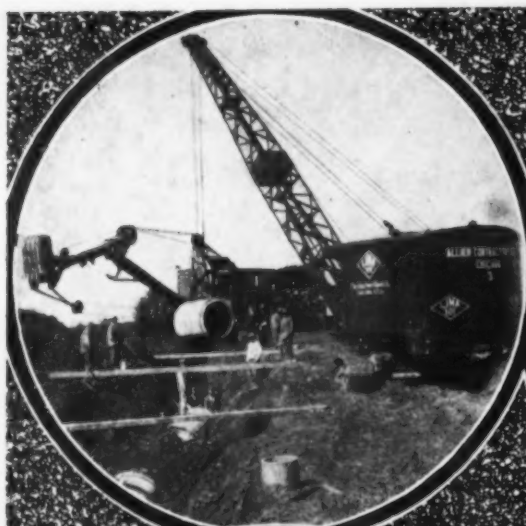
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